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HEALTH HABITS

Choosing Your Doctor

ETC.

WHAT TO DO TILL THE DOCTOR COMES, "DOCTORING" YOURSELF, PATENT MEDICINES, AND OTHER MATTERS PERTAINING TO PERSONAL HEALTH

BY

Z. FULLER, M. D.

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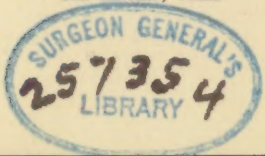

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INDEX.

		Page
	Preface	i
	Introductory	iii
	PART FIRST	
I	Health Habits—General	1
II	Habits Pertaining to Food	3
	Air as Food	3
	Water	12
	Salt, Soda, etc.	18
	Vitamins	18
	Carbohydrates, Fats, Proteids	19
	Mastication	28
	Diet for Children	30
	Diet for the Aged	34
III	Habits Pertaining to Physical Activity; Exercise	36
IV	Rest; Sleep	46
	Insomnia	53
V	Diversion; Play	59
VI	Summary of Health Habits	70
VII	Self-Defensive Ability of the Human Body	74
VIII	Over-Anxiety About One's Health	77

Page

PART SECOND

I Choosing Your Doctor 80
Specialists 97

II Limitations of Doctors and Medicines 99

III Self-Medication; "Doctoring" Yourself 102

IV Patent Medicines 105

V Periodic Examinations 112

VI The Curability of Cancer 114

VII What to Do till the Doctor Comes (First Aid) 117
Hemorrhage (Bleeding) 122
Broken Bones; Dislocated Joints 125
Infected Wounds; How to Prevent 126
Burns 129
Choking 131
Drowning 133
Electrical Shock 135
Fainting 136
Unconsciousness 139
Poisoning 141

VIII Sex—and Common Sense 149

L. Fuller, M.D.

PREFACE

This book is an attempt to present the fundamentals of personal hygiene, and a few of the more important subjects allied therewith, from the standpoint of the family doctor.

When people are so much interested in these subjects as they seem to be at the present time—an interest most commendable—they may get a clearer and better conception by having them presented from various viewpoints. The viewpoint of the general practitioner, the family doctor, seems worth while, as he has exceptional opportunities for knowing the intimate life and needs of people in these respects.

The information, counsel and advice herein I have long been giving by word of mouth, with seeming good results. I am here simply offering it to a larger audience. I advocate no new and unproved theory, champion no fad. What I

give is based upon well-established facts, and on personal observation and experience that is mostly common to every active general practitioner.

No quotations from other writers have been made, consciously, no credits have been given, although I am indebted to many. The scientific facts involved have for the most part been so long established that they have become common property; I could hardly give credit if I would. I trust that this may not detract from the practical helpfulness of the book.

—Z. F.

San Antonio, Texas,
November, 1922.

INTRODUCTORY

It has been well said that we are the sum of our habits. That is, what we do and what we think habitually makes up our personality, makes us what we are, largely. Doing a thing again and again, repetition, like the proverbial dripping of water that wears away stone, "licks us into shape," makes the final product, the individual.

Thus our health is a result, very largely, of what we do habitually. It is good or otherwise because of what we do over and over, every day, established as habits. Of course other things also affect our health, as heredity, environment, and what we do incidentally; which, however, is another story. But we can only accept heredity and make the best of it; environment we may be unable to change; what we do incidentally may be unavoidable. Our habits though we choose and make ourselves, for the most part. And we may choose and acquire any habit we wish. In a word, our habits we may ourselves control.

Therefore it is up to each of us individually to choose, very largely, whether our health shall be good or otherwise. Which we should choose hardly needs argument. Thoughtful people know that good health **pays**, and pays well, in

efficiency and in happiness as well as in good hard cash. Good health is perhaps the most valuable possible possession within the reach of most of us. Yet good health costs little compared with sickness. Good health is cheap. Sickness comes high, very high, usually.

Much that has been said and written about personal hygiene makes this subject seem discouragingly large and complicated; makes us feel that if we were to learn and do all that is advised we should have little time for doing anything else. Yet personal hygiene is really a rather simple matter in its few essentials, which are of chief importance. Learning these few essentials, the fundamental laws of health, and conforming thereto is much easier than is perhaps generally supposed. Living hygienically is simply conforming to the rules of the game of living, getting in line with nature, living as nature intended we should; not for a day or occasionally, or by adopting this or that fad, eating new and strange kinds of food, etc., but rather by doing a few simple, common things as regular, established habits of life.

Much detail about personal hygiene is confusing, discouraging, and for the most part not necessary. We do not need to know much, if anything at all, about anatomy and physiology,

for example, in order to be healthy. Sioux Indians in their primitive state knew nothing of these matters, yet many of them were the picture of health, and not a few lived to be very old. We need chiefly to acquire a few simple habits that conform to the few fundamental laws for healthful living. If we do that nature will be lenient with minor shortcomings, thanks to the marvelous adaptability to environment and circumstance which our bodies possess, which will go far in helping us to be healthy if we will but give it a fair chance.

The human body is a machine, in a sense, and each of us needs to know how to care for and run his individual machine. We are much like an automobile in many respects. Now to care for and run an automobile successfully we need to learn and do a few simple things. Otherwise we shall have much trouble, and possibly tragedy. Yet no great amount of knowledge or skill is necessary, else streets and roads would not be so overrun as they are with these machines. No more is much knowledge and skill needed to care for and run our body with a reasonable degree of success. The few essentials for this is the chief subject of this book. Setting forth plainly and simply the main facts of personal hygiene, making this information practicable, usable, is my chief purpose.

The need for such help as I am here attempting to supply impressed me strongly early in my medical education and experience, and this has grown upon me with the years. I soon learned that much sickness could have been avoided, prevented; it did not have to occur. Often it might have been much easier prevented than cured. Some of these cases could not be cured; the best that could be done was to relieve somewhat the suffering, prolong life a little perhaps, and await the approach of death. Many such cases were tragic; men and women were struck down in the midst of life's activities; lives full of promise were cut off long before their proper time; little children were left orphaned and unprovided for. Yet much of this need not have occurred. All this led me to have much interest in hygiene and preventive medicine, and I followed closely the advancement in these lines. This advancement has been rapid in recent years, far more rapid than ever before, until now science declares emphatically that **most** disease can be prevented. Still many people perish because of lack of a little knowledge of this kind. Many others go throughout life "half sick," inefficient, their work a drag to them, with little or no pleasure and contentment, chiefly because they do not know how to

live, how to care for and run their bodily machinery. This is an attempt to lend a hand in this need.

The book is autobiographical in a sense. That is, the hygienic measures here advocated have been tried out on myself, as well as others. All my adult life I have been practicing what I shall here "preach." I have not found this difficult or unpleasant; rather I have found it easy and pleasurable. Evidently it has been successful, for I had not a good endowment from heredity, my mother and most of her family being tubercular, and I, too, seemed marked for that disease. In fact I have been twice attacked. Yet for more than thirty years I did the hard work of a general practitioner, more than half of which was in the killing work of a country doctor, and this, too, following my first attack of tuberculosis. And yet my energy and ability for work seems still to be above the average for men of my age.

Part Second consists of information and suggestions concerning matters allied to hygiene; "What to Do till the Doctor Comes" (first aid); "Choosing Your Doctor"; "The Fallacy of Self-Medication", etc. For even though we conform to the laws of health we should hardly expect that we shall never have need for the services

of doctors; accidents will happen, and other occasions arise when we shall need the help that only doctors can render. The book is not intended to take the place of doctors, by any means, but rather to help to make their services less often necessary; and when they are needed to supplement and assist doctors in their efforts in our behalf. For by conforming to the laws for healthful living we help to make such efforts far more likely to be successful. Such help is far more practicable and valuable than would be attempts at self-treatment. For while the esentials of personal hygiene may be easily learned and applied, the diagnosis and proper treatment of disease involves an amount of education and experience that can be attained only by those who devote all their time and energy to these matters. In a word, personal hygiene is a small and simple subject, comparatively; the diagnosis and proper treatment of disease is vast and complicated.

PART FIRST

I

HEALTH HABITS.

All right habits make for health. All wrong habits make for disease. The one kind helps to build up and strengthen. The other tears down and weakens. The one conforms to the rules of the game of right living. The other does not. Right habits keep us in harmony with the universe. Wrong habits get us out of harmony. Without such harmony we can not long remain healthy. Evidently it is intended that we shall be healthy. Health is the natural state. Disease is the unnatural.

While every right habit helps in keeping us healthy some help far more than others, of course. A few are of such vital importance that we can not be healthy very long without them. These I would call the **essential** health habits, which we need most to acquire. It is these I shall consider chiefly.

This does not imply that all other right habits may be ignored, but rather that they are of secondary importance as regards health. The habit of brushing our teeth, for example, is hardly vital, although right and commendable, of course. On the other hand the habit of breathing pure air as near all the time as possible is vitally essential to good health. The point is

we **must** have the **essential** right habits if we would be healthy; we **should** have as many other right habits as may be practicable. The more right habits the better, of course.

We know that a habit is acquired by doing a thing again and again, over and over. If the habit be one which we have decided we should acquire we must do the thing at first **attentively,** that is, with our mind on the matter. We set ourself the task, then become our own taskmaster, keeping ourself "on the job." As we continue this it all becomes gradually easier, until finally, if we persist long enough, we come to do the thing almost or quite automatically, with little or no conscious effort. We have then acquired a "habit," which thereafter continues almost of itself. Thus we may acquire any habit we desire, provided we desire it **enough,** and keep at it persistently during the formative period.

The essential health habits are such as shall assure the following:

Sufficient FOOD of right kinds.

Sufficient PHYSICAL ACTIVITY (exercise).

Sufficient REST (sleep).

Sufficient CHANGE (diversion).

The habits necessary for assuring these essentials will be indicated as we proceed.

II.

HABITS PERTAINING TO OUR FOOD

We know that from our food comes our strength, power for doing things; that food is as gasoline to the motor, coal to the engine. Also, we know that **heat** is necessary for life; we must be warm; that when our bodily temperature goes below a certain point death comes, and that this heat comes from our food. Furthermore, our food supplies the material necessary for the "wear and tear" of our bodily machinery. For like all machinery our bodies wear out with use, and this wear must be repaired. But marvelously unlike other machinery our body **repairs such wear itself,** at least for a long time, when given a fair chance.

The need for power, heat, and repairs is ample reason for having our food sufficient in amount and of right kinds.

Air as Food.

Anything, everything necessary for making this power, heat, and repairs, is food. In this sense the air we breathe is food. And it is by far the most important, vital, of all food. We need hardly to be more than reminded that without any other food than air we can live for days; that with air and water only we can live many

days, even weeks. But without air we can live only a few, torturing minutes. Truly, this is "the breath of life."

Purity and cleanliness are very important in all kinds of food; but they are most important of all in the air that we breathe, this being the one article of all food most vitally necessary. We can **exist,** for a time, with very impure, unclean air, thanks to the marvelous tolerance and adaptability of our bodies by which we may **endure** much that is wrong and harmful. But to really **live,** that is to be at our best, we must have pure, clean air **all the time.**

We insist that all other kinds of food shall be pure and clean; we make laws to that effect. We can hardly tolerate even the thought of other food being unclean. But we breathe unclean air, perhaps without a thought, when we remain in a closed, unventilated, stuffy room, taking in again and again the same old foul air!

If we had to **buy** the air we breathe doubtless we would be more exacting than we are about its purity and cleanliness. But being free—"free as air" we say—we accept whatever comes our way, and let it go at that.

Yet it pays, and pays well, in top efficiency, as well as in saved expense for sickness, to see to it that the air we breathe is pure and clean.

Any expense in effort or money to that end will be exceptionally well invested.

All of the purest, cleanest, best air, is **outdoors.** And about all the impure, unclean, worst air, is inside of buildings. There was truth as well as sarcasm in the remark of the cynic who said that perhaps the purity of country air, of which we hear so much, is because the country people seem to keep all the bad air shut up in their bedrooms.

The "sweetness" and "freshness" of outdoor air is only a part of its goodness. It has besides a stimulating, energy-making, life-giving power that seems to be wholly lacking in indoor air. Outdoor air seems to contain some subtle ingredient which science has been unable thus far to identify. Outdoor air is "different", unaccountably different in some way, from indoor air. Air that is shut up in a clean, unoccupied room soon becomes stale, seems to lose some vital ingredient—seems dead. Air needs to **move,** to be in motion, circulate, to be at its best. It also needs outdoor sunlight to help to keep it pure and sweet. These requisites for good air are at their best only when out-of-doors.

All of the best air being outdoors we should be outdoors where we shall breathe it as near all the time as possible. We should cultivate

the habit of never remaining indoors when it is possible to be outdoors. Many of us must of necessity be too much indoors, yet most of us could be outdoors more than we are by simply doing a little thoughtful planning. The office worker may by walking to and from his work, and otherwise taking advantage of every opportunity for getting outdoors, thus increase greatly his intake of outdoor air. The housewife who at best must be too much indoors should do her sewing, and any other work she can on a porch, whenever weather permits. Children should be encouraged to play outdoors, enticed with outdoor games and playthings; should be given outdoor tasks. Holidays and other times of recreation and diversion should be planned for out-of-doors. To this end the automobile has been a godsend to many indoor people, especially women and children, by enticing them into the outdoor air. Personally, my ability to endure the strenuous work of my profession, and survive two attacks of tuberculosis, has doubtless been largely because of my having been much outdoors; having been a general practitioner my work took me to the homes of my patrons, necessitating much travel. Also, I have been fond of hunting, fishing, and other

outdoor activities. And all this I have deliberately planned for and cultivated.

People who must remain too much indoors should see to it that provision is made for letting the good outdoor air come in where they are. This brings up the very large and exceedingly important subject of **ventilation.** Now to discuss fully the subject of ventilation would take much time and space, and probably would be tiresome to most of us. Such full discussion here is unnecessary. Few people, mostly architects and ventilation engineers, need to know all the details of ventilation. But we should all know, and remember, that ventilation experts declare that the best available ventilation may be provided usually by simply **keeping doors and windows open.** Outdoor air will then come in of itself, circulate freely, sweeping the impure air outdoors, where it will be purified. Weather conditions will prevent, of course, open windows and doors more or less of the time. Yet they should be kept open as much of the time as possible, which may be far more than is often the case. Some of the windows in every occupied room should be kept partly open all the time, excepting possible brief periods when weather is most stormy. Two windows, in different walls of a room, preferably opposite

walls, will secure far better ventilation than is possible from a single window. When weather is very cold or stormy, the window to windward should be closed; but one window, at least, in every occupied room should be partly open constantly. During very cold weather this opening should be very narrow, only an inch or two, which will not secure much ventilation, certainly, yet it will be better than none at all. This opening should be at the top of the window, or in the middle where the two sashes of the ordinary window meet and overlap. When the lower sash is raised to make this middle opening, a board should be placed below the lower sash to close the opening there, thus preventing unpleasant draft. This board should be of proper length to fit the width of the window, and wide enough, two to six inches, to correspond to the opening where the sashes overlap in the middle.

A very simple yet quite effective method for ventilation during cold weather is to open for very short periods, a minute or so, all doors and windows in occupied rooms, thus "flushing" them out with outdoor air, doing this several times a day. This is specially well adapted to school rooms, the flushing being done during recess and other times when the rooms are unoccupied, the openings being closed in time to

permit of restoration of comfortable room temperature before re-assembling of the inmates. This procedure, which has been called "supplemental ventilation", is well adapted to offices, work-shops, factories and elsewhere, when many people must remain long together shut up in closed rooms. It may also be used in residences one room at a time being open and "flushed."

We need the good outdoor air especially while we **sleep,** for it is then chiefly that our strength, energy, power for doing our work is accumulated and stored, wear and tear of our bodily machinery is being repaired. For all this, good clean air is needed in abundance. "Sleeping out", that is on a sleeping porch, or otherwise in outdoor air, is an excellent custom, which fortunately has become quite popular in recent years,and is worthy of the highest commendation. The "window tent", a device to the same end, is practicable and satisfactory, exceptionally well adapted to very cold weather, as the sleeper's body may be in a warm room while his head only is in the cold outdoor air. Window tents are inexpensive, and should be used more generally than they are.

It is possible, and beneficial, to sleep out the whole year 'round, even in the coldest weather, provided only that one keeps comfortably **warm,**

of course, with plenty of bed clothing, and specially heavy body clothing, which should be supplemented with hot-water bottles, etc. if necessary. There will be no danger whatever, even in coldest weather, provided only that one keeps comfortably warm. Good evidence, and confirmation of this statement, is the fact that patients in sanitoriums for tuberculosis are kept outdoors in such weather, night as well as day, some of them too weak and frail to be out of bed at all, and not only without any harm, but often with the greatest benefit, **improving most rapidly during the coldest weather**; the low temperature acting as a tonic, "speeding up", apparently, all the vital processes.

If we must sleep indoors our bedroom windows should be kept open—wide open—all the time that weather permits, keeping comfortably warm, of course.

A word about "drafts": With little reflection we can understand that a draft is simply air that is **moving.** Usually it is good clean outdoor air coming in where we are, and displacing the unclean air we may have been breathing. Therefore a draft should be welcomed rather than feared. A draft outdoors—which we call **wind**—we do not fear. Why should we fear wind when it comes indoors? Fear of drafts

comes mostly from erroneous **notions,** which have simply been passed along from generation to generation, with little or no thought about the matter. Of course, if we were to remain in a draft, either indoors or out, when perspiring freely, we might "cool off" too rapidly, and be injured thereby. Otherwise drafts are not only harmless but beneficial. For air that is moving is pretty sure to be good clean air, and the best that is available. Because moving air purifies itself, much the same as moving, flowing water purifies itself; the water of a flowing brook being purer than is the water of a stagnant pool. I have myself slept in a draft habitually for many years, my bed between two windows, which were kept wide open practically all the time, and in a northern climate where zero weather was common. Yet I have never had pneumonia, or met with any other of the calamities which are supposed to come from sleeping in a draft.

The "night air" bugaboo is another notion that has been accepted and passed along without much thought. The only danger from night air is in the **mosquitos** which may accompany it, if they are infected with the germs of malaria; which danger may be avoided by means of window screens. Night air may be, and usually is,

purer even than day air, being less charged with dust and other contamination incident to traffic and industry.

Water.

Next in importance to the air we breathe for our proper nourishment is the water we drink. A very large part of every organ and tissue of our bodies is water, which is being constantly eliminated after it has served its various purposes, therefore must be frequently replenished. Besides, all solid food must be mixed with water before it can be digested and otherwise prepared for absorption and use by the body. Adults need about three pints of water each twenty-four hours, in ordinary conditions. But the amount fluctuates rather widely because of varying conditions, chief of which is the amount of perspiration; when we perspire freely we need more water, of course, and when perspiration is long continued and profuse the amount of water needed is much increased, being doubled, tripled, or even more. We differ individually somewhat as to the amount of water we seem to need; certainly some people drink far more than the average, and others drink much less. Both extremes are probably harmless and unimportant, ordinarily; but in some diseased conditions the

amount of water which should be drunk is of much importance. However, that need not be here considered, it being a matter for the medical attendant.

We may safely trust our sense of thirst to tell us when we should drink water, and how much. That is what the sense of thirst is for. And it will not make a mistake if we will give it a fair chance for asserting itself. To drink when we are not thirsty, or to refrain from drinking when we are, would be a mistake, ordinarily, although there are exceptions to this, of course, as in diseased conditions. When we are hot, perspiring freely and very thirsty, we may possibly drink more than we really need; which ordinarily would do no harm. But this mistake may be easily avoided by simple drinking **slowly** at such times, so that the sense of satisfied thirst may have time to "keep up" with the intake of water, this sense being a little slow in saying "enough"; so if we drink too fast, "gulping it down", as we may be tempted to do when very thirsty, we may then take more than we need. Which would not be a serious matter. Even ice water, drunk reasonably freely when hot and very thirsty will do no harm, **provided it is drunk slowly enough.** Thus taken we may safely drink enough to satisfy thirst. To insure

drinking slowly enough a simple and practicable method is to retain in the mouth for a moment each mouthful of water before swallowing it, thus "taking the chill off," avoiding too rapid chilling of the stomach, and enabling the sense of satisfied thirst to signal "enough" at the proper time. So long as we satisfy the sense of thirst with water **only**—the one and only necessary drink—we may safely trust it to guide us right. When we add to the water sugar, flavors, or other things, as in "soft" drinks, we may then drink for the "fixin's" rather than for the water they contain, and possibly when we do not need water. However, when such additions are only sugar, pure fruit juices and flavors, and the usual effervescent gas, they are harmless, and may be even beneficial, when taken in moderation. But such drinks are not a necessity, by any means, as is pure water, which will satisfy natural thirst as nothing else can. When we are very thirsty no other drink tastes as good as water, nature's beverage. Which is good evidence that water is the only drink we really need. The water we drink should be pure, clean, free of all disease-producing contaminations, of course. Details of how this may be assured are beyond the scope of this book, but

are easily available from health officers and other sources.

Drinking while eating has been held to be harmful, by diluting the digestive secretions, etc. But recent investigation has proved this to be a mistake. In fact, drinking water with meals has been proved to be not only harmless but actually beneficial, assisting digestion, at least when digestion is normal. Most kinds of food need the addition of water to prepare them for digestion and assimilation. Therefore desire for drink while eating is natural and right, within certain limitations. Here again our sense of thirst may be safely relied upon to guide us right.

However, drinking while eating may be harmful **indirectly,** by enabling us to eat harmfully **fast.** Eating too rapidly is rather a common fault, and a frequent cause of indigestion. With the help of drink we can "wash down" our food before it has been sufficiently chewed. Then the stomach is called upon to do the work which should have been done, and done better and easier, by the teeth. The stomach does such work rather imperfectly; sometimes it can not do it at all; always it puts upon the stomach an unnecessary, and usually a difficult, task. All this results in the food remaining too long

in the stomach, which causes fermentation, gas, "sour stomach," "heartburn," eructation, stomach distress, or actual pain, headache, etc., all of which spells "indigestion", which can make us pretty thoroughly miserable, to say the least, and when long continued may cause trouble that is far more serious. All of which may be easily prevented by thorough mastication. And thorough mastication may be assured by simply refraining from drink while eating, which compels chewing until food is sufficiently moistened by the mouth secretions so that it can be swallowed. That constitutes proper mastication.

Improper mastication is only one of several causes of indigestion. Another common cause is **over-eating,** taking more food than we need, more than the digestive organs can take care of properly. This usually goes with improper mastication and the taking of too much drink; for those who over-eat nearly always eat too fast, which can be done only with the help of much drink. When we eat too fast we are all but sure to eat too much; the sensation of satisfied appetite lags behind the rapid intake of food, so when appetite finally signals "enough," more food has been taken in than was needed; which constitutes over-eating, a result of which is often indigestion that may be easily avoided,

and sometimes cured, by simply refraining from taking any drink while eating.

If we have acquired the habit of eating too fast, meantime taking much drink, when we attempt to correct these wrong habits by refraining from drink, we shall feel at first that we **must** drink; that we can not swallow our food without drinking; that food will "stick in the throat." But if we will simply persist in taking no drink, meanwhile chewing thoroughly, the saliva will finally moisten the food sufficiently to permit easy swallowing; for chewing stimulates the salivary glands and increases the amount of saliva. Persisting long enough we may finally eat a meal of even dry food with hardly a thought of drink. Then we shall have displaced wrong habits of eating with right habits. All this may be, and should be, made easier and less unpleasant by drinking a glassful of water, or more if desired, immediately before commencing to eat, repeating this at the end of the meal if then thirsty. In fact, we may drink without harm during the meal, **provided** we refrain from drinking **when food is in the mouth,** thus avoiding "washing down," which is the point of this matter. But if the washing down habit has been acquired, and is to be broken off, then it were better not to take any drink

while eating, otherwise one would be very apt to fall unintentionally into the old way again.

Salt, Soda, Etc.

Salt, soda, lime, iron and other similar chemicals, the names of which we seldom ever hear, are articles of food in the sense that they are necessary for our proper nourishment. But most of us need not know much if anything about these substances, as usually we get them in necessary amounts in other and staple articles of food as natural or necessary ingredients, and quite unconsciously, **provided** our diet is **sufficiently varied.**

Vitamins.

Another class of ingredients in food of which we have only recently begun to learn, has been named "vitamins". We know comparatively little about these exceedingly important substances, but science is busy investigating them. However, we have learned that vitamins are very necessary for our proper nourishment and health. We have learned that lack of vitamins in food eaten is largely the cause of scurvey, and rickets, both very serious diseases. It is probable that we shall learn in time that lack of these substances causes other diseases, and

has more or less to do in the causation of still others. Various common, staple articles of food contain vitamins, so we will get them in sufficient amount and variety, usually, by simply eating a sufficiently wide variety of such staple foods. Some varieties of vitamins are destroyed by cooking, and such we shall get only from foods that are eaten uncooked; as lettuce, tomatoes, various fruits, nuts, butter and milk, which have other food values in addition to the vitamins they contain. So to insure our getting vitamins in sufficient amount and variety we usually shall need simply to eat a rather wide variety of staple foods, particularly including those that are eaten uncooked.

Carbohydrates, Fats, Proteids.

The bulk of our food is made up chiefly of the three classes, carbohydrates, fats and proteids. The carbohydrates are the starches and sugars of all kinds, contained chiefly in grains and fruits, which make up the larger part of our food. Fats include all fatty and oily kinds of food, chiefly fat meats, cream and butter, but also the oil of nuts and other vegetable substances. Proteids are mostly in lean meats, fish, eggs and cheese; but certain vegetables, as beans, peas, and nuts, also contain proteids.

These three classes constitute the staple foods. In addition to the chief food elements which give them their class names, the staples also contain other food elements, as soda, iron, etc., and the vitamins. Therefore if we simply eat the staple foods in sufficient amount and variety we shall get all the food elements necessary for our proper nourishment.

These three classes of food, carbohydrates, fats and proteids, we need in quite definite proportions: about 60, 30 and 10 per cent, respectively, nutritive values. Yet we need not weigh or measure the various articles of our food in order to get these proportions near enough right for practical purposes, ordinarily. We might suppose it to be otherwise, judging from much that is said and written these days about food values, calories, etc., concerning which we need not know much, if anything at all, in order to be properly nourished. If we will simply take some pains to eat habitually as wide a **variety** of these three classes of food as is available ordinarily, we shall be properly nourished; thanks to the marvelous **adaptability** that our bodies possess. Examples of such adaptability are seen in the natives of different parts of the world; the people of the Arctics living and thriving on a diet that is almost wholly of fats; peo-

ple of the Tropics living and thriving equally well on a diet almost wholly of carbohydrates; the plains Indians of North America in their native state, who were exceptionally hardy, living almost wholly on protein food, meat, in the time of the buffalo. This adaptability will go far in helping us out with our food, if we will only give it a fair chance.

However, while we can get along with almost anything in the way of food, at least for a time, we thrive best, feel best and are up to top efficiency, only when we eat habitually a considable variety of these three classes of food. This is exemplified in races that have attained highest civilization, all of which races having a mixed diet of considerable variety. Therefore it is well worth while for us to see to it that our diet shall be sufifciently varied.

We are inclined naturally perhaps to eat only, or chiefly, of such kinds of food as we like best. But if we permit this inclination to have its way we shall not be nourished as well as we should be, to say the least; or as well as we easily may be, by simply cultivating the habit of eating a wider variety of food, although some articles may be second choice. Failure to do this, persistence in eating only such foods as they like best, is doubtless a very common cause of lack

of sufficient vigor and vitality in many people, and sometimes is the cause of actual disease. Such wrong eating habits usually date back to early childhood, when the unwise indulgence of parents permits children to eat only such foods as they like best. The natural result is impaired nutrition, and the insufficient vigor and vitality that goes therewith. Such wrong habits may, and often do, become permanent, and such impairment of vigor and health then continues throughout the entire life of such unfortunate individuals. Doubtless this condition of things is more common than is generally supposed.

The remedy for such faulty food habits, and their results, lies in not permitting children to eat only the narrow range of foods that they may like best, and insisting that they shall eat a sufficiently wide variety, even though they may not like some of it. This may not be as difficult of accomplishment as might be supposed, if there is steadfast persistence on the part of the parents, along with which there may be necessary some adroit management. A method that has been used successfully is not to permit the child to have any food until it is thoroughly hungry—hungry enough to eat any reasonable food that may be set before it. This will not be a hardship or cruelty to the child, by

any means, although parents might feel otherwise. Instead it will be beneficial, if the child has acquired the habit that many do of calling for its favorite food whenever it happens to think of it. If such favorite is something in the way of sweets, as is usually the case, it will eat such food even though it may not be really hungry at all. And when it is not really hungry it does not need food, usually, and may be better off without it. Besides, sweet foods, particularly candy and the like, cloy appetite, and a child that is permitted to eat such food without any restraint may not become really hungry at all for any other kind of food. In which case it will not be properly nourished, of course. Thus "piecing" between meals, particularly the eating of candy at such times may, and often does, become a matter with serious consequences. To avoid this pernicious habit, or to correct it when it has been acquired, is simply a matter of not permitting the child to have anything to eat until it is **hungry enough to eat something else than its favorite food.** When it will do that it is really hungry, and really needs food, and should have it, of course.

Most young children, if not all, need food oftener than the usual three meals a day; particularly when they are growing and developing

rapidly, or if very active with outdoor play or work. Therefore lunches of the right kinds are not only permissible but necessary. A reliable and safe guide here is **hunger,** real hunger, that calls for and will accept substantial food. For such lunches nothing is better than bread and milk; next best are sandwiches of bread and butter or bread and meat.

The desire for sweet foods which is all but universal with children, is natural; they seem to need more of such food, proportionately, than do adults. Therefore they should be given sweets, of course. But such kinds of food should be permitted only at **proper times,** that is, at the regular meal times, as a part of a meal, and the **last** part, after the more substantial and less tasty articles have been eaten. Eaten at such times only, children may usually be permitted to eat as much sweet food as they desire, within reason. This is the proper time for eating candy, which is really a good food, but it should not be permitted at any other time. The common custom of eating desserts, which are usually sweet, at the end of meals, is founded on good and sufficient physiological truth.

If your child is disposed to eat only the few articles of food it likes best, you should not permit it to eat these between meals, but only

at regular meal times, and then only **after** it has eaten the other kinds of food which you have decided it needs for a properly balanced diet. Such foods it will eat willingly, and with relish, when it is sufficiently hungry, as it will be in time if you simply withhold all food long enough. Which will not do any harm at all, but will instead be beneficial, and in more ways than the one. Real, urgent hunger, keen appetite for food, is perhaps the most effective "tonic", helping much to insure good digestion and nutrition. Besides, the training in obedience, and the enforced self-denial, is valuable discipline.

While right dietary habits are acquired easiest during childhood, it is never too late to acquire such habits or to correct wrong habits of this kind. At any time of life we may train ourselves to eat, and relish, almost if not quite any kind of food we need, and in much the same way as I have described for training children in this respect. Appetite is very teachable. By simply eating when we are most hungry, as at the beginning of a meal, such articles as are "second choice", persisting in this for a time, we finally will come to like them better; and they may even become "first choice." Thus we may learn also to like food that formerly was positively disliked. So we may learn to like

almost anything that is edible. The chief requisites for this is eating such foods when we are **most hungry,** and reasonable persistence in this.

My personal experience in this respect may be worth telling. I could hardly tolerate the peculiar flavor of tomatoes when I first tried to eat them, which was long before I learned of their nutritive value. Yet they looked so good and inviting when I saw people eating them with relish and enjoyment, that I wished that I might learn to like them myself. So I tasted them again and again, **trying** to relish them, and was surprised to find that soon their peculiar flavor became less unpleasant, which was followed a little later by mild relish, and this became finally keen liking, which has remained ever since. Now tomatoes are a favorite food with me. And this I find has been the experience of other people. I have had similar experience with other kinds of food, as have others also. Thus we may train appetite to call for, and relish, any article of food we need for our proper nutrition.

We should train ourselves to like a **wide variety** of food. For by eating a sufficiently varied diet we may best, and easiest, insure a **balanced** diet. In other words, by providing appetite with a sufficiently wide variety of food

enables it to balance the diet sufficiently for practical purposes, in ordinary circumstances.

This does not mean, however, that we should eat many kinds of food, at every, or any, meal; but rather that we should get the necessary variety by distribution among many meals. In fact, it is preferable, and advisable, to eat few articles at each meal; half a dozen at most. A greater number than this may easily tempt us to eat too much, more than we need. Over-eating is a rather common, and sometimes a very serious, fault, as I have explained heretofore. One of the several things necessary for avoiding this is to satisfy appetite with few articles of food at each meal.

One of the purposes of appetite is to tell us **when to eat.** It may be safely trusted to tell us right. We shall rarely make a mistake by refraining from eating when we are not hungry. When meal time comes if we have no appetite it will do us no harm certainly, and usually will do us good, to miss that meal. On the other hand, if we are hungry—really hungry—at other than our regular meal times, it would not be a mistake to eat then. In other words, the customary three meals a day at regular intervals has become established for reasons of convenience, not for physiological reasons. Hunger is

the physiological guide that tells us when to eat; and if given a fair chance it will also tell us accurately what to eat, as well as how much to eat.

Keen appetite for food helps much in its digestion. Gastric juice and the other digestive secretions flow most copiously and are most efficient when we are very hungry and eating with keen relish. The very best "tonic" known, in the sense of something that increases digestive power, is keen appetite and relish for food. Here is a practical, and valuable fact worth remembering, especially by those who suffer from weakened digestive ability. If such will get a keen appetite by means of sufficient physical activity in the open air, which is the best possible appetizer, meantime refraining from eating until **thoroughly** hungry, they shall usually find their digestive power much increased, and without resort to medicines.

Mastication.

Proper mastication of our food is of more importance than might be supposed, and its further discussion in this connection is well worth while.

The chief purpose of mastication is, of course, the breaking up into small particles of our solid

food, so that the digestive juices can mix thoroughly with and digest it. The stomach can do this "in a pinch," for a time; but usually it does it under protest, and imperfectly, and when long continued a common result is indigestion. Good teeth, to which such work properly belongs, can do this much better and easier than the stomach. If we haven't good teeth we can not use money more profitably than by investing some of it in first-class dental work. Mastication also assists in mixing the mouth juices, saliva, with the food, which not only prepares it properly for being swallowed, but also assists somewhat in the digestion of starchy kinds of food. Still another desirable result of proper mastication is its help in avoiding too rapid eating, and its usual result, over-eating; which has been discussed on a former page.

Important as is proper mastication it is doubtful that we shall get from it the rather marvelous results that seem to have been obtained by Mr. Fletcher, the apostle of thorough mastication, for which has been coined the new word "fletcherize." Doubtless Mr. Fletcher was exceptional in his nutritive functions; for in no other way can be explained the marvelous and well authenticated results that he obtained. Probably nobody else ever derived from his

method **all** the benefits that Mr. Fletcher seemed to derive therefrom. Nevertheless, "fletcherizing" is commendable; it can do much good, and certainly it can not do any harm. It is well worth acquiring as a habit, especially by those who have insufficient digestive power, a rather large class, especially among sedentary workers.

A simple and effective means by which thorough mastication may be insured, is to take no drink **while food is in the mouth.** We **must** then chew thoroughly before food can be swallowed; which has been discussed heretofore. I need hardly add that the habit of thorough mastication is well worth acquiring.

Diet for Children.

For babies during the first few months of life, the one and only **best** food is mother's milk; provided the mother is at least reasonably healthy, and has sufficient milk of good quality. Breast-fed babies are better nourished, are more vigorous, and healthier, than are bottle-fed babies. Breast-fed babies are much less likely to get sick than are babies fed in any other way; and if they get sick they are more likely to get well. These facts have been proved emphatically and conclusively by experience and statis-

tics. Not only is the breast-fed baby better nourished and healthier during the nursing period, but also afterward; probably throughout all the life of such they are the better for this early experience. Fortunate indeed are they who have been nourished at the breast of a healthy, vigorous mother during most of the first year of life.

These facts should be sufficient to induce any mother to nurse her baby if she possibly can. There are still other reasons for her doing this, but their discussion is beyond the scope of this book. However, one rather common fallacy should be pointed out, the opinion that "it is less trouble to raise a baby on the bottle." In fact it is exactly the other way, as every mother will confirm, I believe, who has tried both methods. The "stomach and bowel trouble" that is all but certain to be the lot of bottle-fed babies, makes much trouble and anxiety for the mother, many sleepless nights, and usually much extra work. There is hardly anything of which I know that is more harrassing, wearisome, and exhausting to a mother than is such a sick and fretful baby. And when long continued, as it so often is with bottle-fed babies, it may become all but unendurable.

Breast-fed babies need no other food than

the mother's milk until they are about six months old; provided, of course, the mother has sufficient milk of right quality. Then should be commenced the giving of cow's milk, in addition to the mother's milk. "Whole" milk should be used, fresh as possible, and **clean,** from cows that are healthy. "Certified" milk is best. The amount given at first should be small, an ounce or so, three or four times a day, and at regular feeding times, the amount being increased gradually as the baby gets accustomed to the new food. After a month or so of this, then should be commenced the addition to the cow's milk of a little oatmeal-water, barley-water, or rice-water, an ounce or so of either with each such feeding, increasing the amount gradually for another month or so, when a little cracker, or well toasted bread should be added to the cow's milk mixture; still later, other simple articles of food, particularly egg, and fresh orange juice, should be added to the baby's diet, so that by the time it is a year old it shall be nourished largely by other food, but chiefly by cow's milk. Then the baby should be weaned. To permit it to nurse longer would usually be a mistake; both baby and mother will be the better for the weaning. For the first few weeks following weaning the child

should have no other food than I have mentioned, when if all is going well other simple, staple articles of food, one at a time, should be added from time to time, so that by the time it is about three years old it shall be getting all the staple foods, a liberal proportion of which should still be good cow's milk.

These details concerning baby-feeding seem necessary because a good many mothers give their babies "anything they want", in the way of food, from the mistaken notion that if a baby desires an article it needs it, forgetting, apparently, that a baby will put almost anything in its mouth, including lumps of coal, pebbles, and even its own toes if possible. Such indiscriminate feeding is the cause of much sickness, for the digestive organs of babies are unable to digest properly more than a very limited variety of foods. And undigested, or imperfectly digested, food can cause much trouble in the easily disturbed digestive organs of a very young baby, which are capable of digesting properly hardly anything else than milk. The "stomach and bowel trouble" that is so prevalent during the first few years of life is often caused by improper food. Another common cause is food that has become contaminated by certain disease germs that are poisonous to the digestive

organs, particularly those of babies. Such germs are rather widely distributed, especially during the warm weather of summer, when they may, and often do, easily contaminate food. Least likely perhaps of all foods to become thus contaminated is mothers' milk; which accounts largely for the healthfulness of breast-fed babies. All food for babies should be specially protected against contamination by every means that is possible.

The feeding of babies is so very important that it is nearly always advisable that it should be under the supervision of a competent doctor; certainly always if there is any trouble with the babys' digestive organs.

Diet for the Aged.

With the passing of the more active period of life, as age creeps on, we need less food, naturally, for less power is being used, and all the vital processes are slowing down. We need less protein, especially meat, which should be much reduced in amount, the very aged and inactive perhaps being the better for taking none at all, for then meat protein seems to "clog" the machinery, as manifested by muscular soreness, lameness, etc., so-called "rheumatism" of

old people which is often not true rheumatism, but is a result, in some cases apparently, of too much meat and too little physical activity. The diet of such should be largely milk, as this fits best, physiologically, the very old as well as the very young.

III.

HABITS PERTAINING TO PHYSICAL ACTIVITY.—Exercise.

"In the sweat of thy face shalt thou eat bread," contains a blessing as well as a sentence. For work is exercise, and exercise is very necessary for maintaining good health. We can not long remain healthy, certainly not at our best, without physical activity, exercise.

We were made for work, for doing things. Manifestly, the marvelous machinery of the human body is made for activity. Body, mind and spirit all are developed fully only when they are used, exercised. Without work we can not develop and maintain our highest efficiency.

All this is confirmed by anatomy and physiology. Circulation of blood is the basis of our life; it is almost life itself. When blood stops circulating life also soon stops. When our blood circulates imperfectly we are no longer perfectly alive; we are then below par. The efficiency of every organ and part of us depends very largely upon circulation of blood.

Blood can not circulate properly unless we use our muscles. Muscular contraction is absolutely necessary for good circulation of blood.

This is because many of the blood vessels lie in and between the muscles, in the outskirts of the circulatory system, where circulation is weakest, and where pressure on the blood vessels by the contracting muscles speeds up the flow of blood, helps to push it along. Without this assistance from the muscles all the blood throughout the entire body flows slower, sluggishly, more or less; and along with this slowing down of circulation all the vital processes slow down also. Likewise the circulation of lymph, the "white blood," second in importance only to red blood, circulates largely in its vessels and "spaces" lying between and in the muscles, contraction of which helps along the lymph stream.

We do not need to have exceptionally large or strong muscles in order to have good circulation or good health, although some people seem to believe otherwise. Any size of muscles will answer this purpose, provided they are used **enough.** We do not need to be athletes, by any means, in order to have good circulation and be healthy. In fact, the exceptional muscular development of athletes seems sometimes to be a hindrance to good health instead of a help, for some athletes are far from pictures of health, having trouble with the heart, the

most important part of the circulatory system.

Neither do we need to devote much time to the comparatively small amount of exercise necessary for good health. Regularity and persistence in exercise count far more than does the length of time devoted to it. Exercise of short duration, but several, or many, times a day, is usually preferable to making one or more stressful times of it, particularly for those of sedentary occupations, who need most to give systematic attention to exercise. Such may rather easily take more exercise than they really need, more than is good for them, by continuing it too long, or too violently, making them too tired, with something of the feeling of exhaustion at the end of their exercise. While this would be undesirable, it would not do any serious harm, ordinarily, unless the exhaustion were excessive. We may take a little more or a little less exercise than is best for us without any serious harm at all; there is a rather wide "margin of safety" both ways; the amount does not have to be "just right," thanks to our adjustability to conditions and circumstances. A trustworthy individual gauge for the amount of exercise most beneficial, is the feeling of refreshment and well-being that should come at the end of exercise; and at the end of each day

the feeling of comfortable physical weariness as bed-time arrives, and that passes with the coming of a new day.

Many of us get all the exercise we need right along with our occupation; some get more than they need, as farmers and others whose occupation involves much physical labor; many housewives, etc. Such, of course, do not need in addition any "physical culture," although some of the physical culture enthusiasts would have us believe otherwise, it seems. The simple gauge I have mentioned will also serve us here; if we go to our bed at night comfortably tired physically, the bed looking good to us, we have had sufficient exercise, we may safely conclude, even though we have not done any calisthenics, or other systematic exercise than our work provides. If, however we do not have this wholesome sense of physical weariness at the end of each day, then something in the way of physical activity should be added to our daily routine.

One of the best kinds of physical activity is **walking.** Nearly everybody may have this simple yet excellent exercise, if they will. The chief requisite is usually a little thoughful planning for it, and then a steadfast persistence in carrying out the plan that has been adopted. This persistence may be made easier if we have

an incentive which shall **entice** us to walk. When we walk only "for our health," from a sense of duty, it is hard to keep it up long enough to do much good; usually it soon becomes so monotonous, such a bore, that we give it up long before it has done much, if any, permanent good. To get the most permanent benefit from walking we must walk every day, and keep it up; it must become a permanently established habit, a part of each day's regular routine. To do this we should have, if possible, some object in walking that shall entice us to start out, and then beguile and entertain us as we walk. If we are so fortunate as to enjoy the great outdoors, with its many charming attractions, this may be sufficient for the purpose. If we are lacking in this respect it is quite possible to cultivate an interest in and appreciation of the beauty and charm of nature by simply giving it a little thoughful attention; we need mostly to get **acquainted** with nature in order to see, and be entertained by, her charms. When we appreciate nature we shall have ample incentive for walking.

Simply having an object in view which makes walking necessary, may be sufficient incentive to keep us going. Thus, office workers and others whose work is sedentary may get suffi-

cient activity by walking to and from their work, also taking advantage of any other opportunities for walking. Or they may have an avocation, something in the way of active diversion for the hours when off duty, preferably something which shall take them outdoors; the care of a garden, or a small poultry plant, in the back yard, has proved to be just the thing needed for this purpose by a good many sedentary workers. Whatever we choose for this purpose should be something in which we are **interested,** something we **like to do,** so we shall stay on the job. Otherwise we may give it up before we "get the habit," and fail to get permanent benefit. For we are all still children, more or less, and too easily shirk a thing in which we are not interested. However, downright unpleasant work can answer the purpose of exercise fairly well; pumping up an automobile tire is good exercise; likewise doing the many "odd jobs" that are constantly arising in and about every home. In a word, a little thoughtful planning can usually provide us with all the exercise we need for health's sake.

Yet there may be circumstances that make impracticable such means for exercise as I have indicated. In such cases something in the way of **calisthenics** may be made to answer the pur-

pose very well. Now the word calisthenics is a rather formidable word for something that is very simple, that really means almost any system of movements which bring into action many muscles. Just what system is used is of little consequence, comparatively, although some of the inventors of such systems would have us believe that theirs is the only really effective one. The chief essential is to bring into action **many** muscles; the more the better, and particularly the groups of **large** muscles of the trunk and limbs. No apparatus is necessary, although dumb-bells, Indian clubs, weights and pulleys, etc., may be used if desired. But such apparatus is usually soon abandoned, so is hardly worth while. Then, too, the simpler a thing is the more likely we are to continue to do it. For there's the rub with calisthenics, the difficulty of **keeping it up;** it being monotonous work we soon tire of it, and are prone to take advantage of any opportunity or excuse for evading it, shirking it on the slightest pretext. Yet calisthenics is capable of accomplishing much good when established as a regular daily habit. And this is quite possible; it can be done if we will persist. When thus established we may finally come to **like** it, for then we shall get from our calisthenics pleasure, in a way, a

certain sense of satisfaction from using our muscles, an exhilaration and a feeling of general well-being from the speeding up of circulation, as from a gentle stimulant. At least there will be self-approval from having done a thing that needed doing. All of which shall grow with cultivation until finally if circumstances make us miss our regular calisthenics we shall have the feeling of something lacking in our daily routine, as when circumstances make impossible our regular morning ablutions, brushing our teeth, brushing our hair, etc.

When calisthenics has been decided upon it should be done at regular times, as we do any other item of our regular day's work; and when that time arrives we should do our exercise whether we "feel like it" or not, just as we do any other part of the day's routine. We would not neglect to wash our face, brush our hair, etc.; no more should we neglect our regular exercise.

The most convenient and preferable time for doing calisthenics is usually mornings and evenings, in the privacy of our sleeping room, before dressing, and after undressing for bed, with only the night clothing on, or no clothing at all, which permits most freedom of movement. Whatever system of movements is adopted

should be done **energetically,** with vigor and "snap." To do them otherwise, listlessly, languidly, in a disinterested and perfunctory way, will not do much good. The muscles must contract with **vim,** else circulation shall not be speeded up as it should be. When done properly, ten minutes devoted to calisthenics twice daily can keep one fairly fit, as to exercise. Additional benefit will come from doing some of the simpler movements, those that may be done conveniently in day clothing, several times during the day; a minute or two at a time will bring refreshing relief from the monotony of work, particularly for the sedentary worker.

Calisthenics may be used also as a temporary substitute for other kinds of exercise when circumstances make the latter impracticable, or impossible, as while one is traveling, or when inclement weather makes outdoor activity inadvisable. Such supplemental use of calisthenics will prevent, largely if not wholly, that "out-of-sorts" feeling that so commonly follows a journey, or other inactivity indoors.

Personal instruction by a teacher of calisthenics is a considerable advantage, while beginning. Demonstration as to exactly how to put into the movements the necessary snap and vim, is very helpful, making learning easier and

faster. Yet a teacher is not absolutely necessary; all may be worked out from books or other printed instructions, preferably illustrated. One of the best things of this kind of which I know is a booklet, "Ten Minutes Exercise for Busy Men," obtainable at Spaulding sporting goods stores. Another is Walter Camp's folder, "The Daily Dozen," obtainable at news stands. Both are inexpensive, costing ten cents each, yet they contain all the essentials for practical calisthenics.

IV.

REST; SLEEP.

Work, exercise, uses up energy, strength, power. It also wears out the bodily machinery. Therefore strength, energy, power needs renewal; wear and tear of the machinery must be recuperated from time to time. Such renewal and recuperation is accomplished mostly while we rest, chiefly while we sleep. So "sleep that knits up the raveled sleeve of care," is more than a poetic expression.

Rest, then, particularly sleep, is as necessary as work, exercise, for keeping us fit. We must work and we must also rest, if we would keep body, mind and soul healthy, sane.

Most of all, our **nervous system** needs rest. For during all our waking moments the marvelously intricate and finely adjusted mechanism of our nervous system is at work constantly, as our nervous system controls and directs all our activities, physical, mental, moral. It is general superintendent of the works. Even during sleep it must still supervise the vital processes of which we are quite unconscious; the brain still busy, more or less, as is manifested by dreams. Therefore, rest of the nervous system is specially important, imperative.

When we do not have sufficient rest, or when overworked, which amounts to much the same thing, our nervous system suffers most, as manifested by the feeling of then being generally "out of sorts," mentally depressed, seeing mostly the dark side of life, and generally unfit for our work. On the other hand, after a long night of dreamless and refreshing sleep we feel at our best, and are at our best. All the clouds have passed away, the world takes on a rosy hue, and then, if ever, we feel competent for our day's work and whatever may confront us.

We have learned that there is a physical basis for all this. That is, the nerve centers, the seat of nerve force, composed mostly of nerve cells, **store up power,** ability for doing their work, chiefly while we sleep. During sleep these cells become larger, plumper, really expand with accumulated power. On the other hand when we have been long at work and are tired, these cells become smaller, shrunken; and when very tired they become shriveled, because the stored energy has been used up. In a word, these cells are much like a storage battery, "charged" while we sleep and "discharged" when we work. When we get insufficient sleep, or work too much, this nerve power becomes too much depleted for most efficient service; like the storage battery

that gives unsatisfactory service when it gets "weak."

Our muscles also are made up mostly of cells, that expend with energy while we sleep, and become smaller while doing their work, much the same as do nerve cells.

Besides, all cells—and every organ and part of our body is made up mostly of cells—wears out with use, work and finally dies, when they become useless, of course, even worse than useless, for then they become like foreign matter, and in a sense are poisonous, and must be removed, else they would do harm. The soreness, lameness of muscles that have been used too much; the mental dullness and lassitude, perhaps headache, following excessive mental work or emotion—all this is because of accumulation of worn-out cells not yet eliminated. This elimination, and the replacement of worn-out cells with new cells, is done mostly while we sleep.

Sleep, then, is the most necessary and best kind of rest. All other rest is only partial. Sound, dreamless sleep is complete rest. Also, we rest "fastest" when we sleep; therefore if we are pressed for time for getting rested we should sleep, if possible.

Sleep is as necessary for life as is food. Deprived of sleep we would die just as surely as

if deprived of food. And we would die much sooner than without food. Criminals have been put to death by depriving them of sleep—a horrible and inhuman kind of torture. However, we can exist a long time with insufficient sleep; but it undermines vitality and health, and when much prolonged it causes serious trouble that may be irreparable. Insufficient sleep often has a part, sometimes a very large part, in causing insanity.

Sleep being so exceedingly important we should see to it that we get enough. The amount we need for maintenance of good health and highest efficiency varies with the amount of work we do; the more work we do the more sleep we need. The amount varies also with the kind of work; brain workers usually need more sleep than do those whose work is chiefly muscular. Those whose work involves much responsibility, prolonged and unusual excitement, mental or emotional stress, all of which use up nerve power rapidly, need much sleep. Also, those who habitually work at high tension —a rather large class among high-strung Americans—need more than the average amount of sleep. On the other hand, those who seem always to "pursue the even tenor of their way", perhaps need less than the average amount of

sleep. The amount needed varies with age; babies need to sleep most of the time during the first few weeks following birth; children and youths need more than adults, the amount necessary becoming gradually less with advancing age until full development is attained, after which during the most active period of life the average daily requirement is about eight hours, until middle age is passed, when the amount needed seems usually to become less, for a time, but increases again with old age, until those who reach extreme old age seem to need about as much sleep as do young babies. The amount varies also individually, some people needing more, others less, than the average.

A simple and practicable rule by which we may determine the amount of sleep we need, is to sleep enough in each twenty-four hours so that when we waken mornings we shall have the feeling of having slept enough; a sense of freshness, renewed energy, and general well-being, a readiness for the day's work, which are the natural results of sufficient sleep. These results, not the number of hours we have slept, is the important point of the matter. If we waken unrefreshed, still sleepy, languid and dull, with little or no heart for the day's work, we have not slept enough, whatever the number

of hours may have been; and if this is a regularly recurring state of things a change of habits is necessary for getting more sleep.

We should not be wakened from sound sleep, but should waken naturally, as we shall when we have slept enough. This rule is specially important to young children and youths. However, dozing after one has wakened naturally is not sleep, but a kind of **loafing,** which should not be encouraged, especially in the young.

There may be, probably shall be, times when we can not have all the sleep we need; times when we must work more hours than we should; times when sickness of family or friends, and other occasions of special stress, that make it impossible for us to get sufficient sleep. However, such temporary loss of sleep is usually not a very serious matter, unless greatly prolonged, as we have been made for withstanding considerable hard usage, exceptional stress and strain, at least for a time, without serious harm; otherwise in a world so full of trouble the human race should have become extinct long ago. Yet we should give ourselves a fair chance, as far as possible, for coming through such stress with little if any harm, as we may by taking advantage of every opportunity for getting sleep, meantime conserving our energy, if possible,

by doing less of our usual work, or better still, none at all, and in every other way possible taking special pains to conform to hygienic laws.

When we must overwork, particularly if this be much prolonged, it will be very helpful if we avail ourselves of every opportunity for getting sleep, even though it may be for only very brief periods. For example, a busy lawyer who is often overworked tells me that he has cultivated the habit of taking brief naps while sitting at his desk, whenever opportunities occur, however brief the time may be. And he finds this is marvelously refreshing and helpful, although these naps are usually for only a few minutes. I have had similar experience myself. Such naps are still more refreshing when taken lying down, for then all muscles may relax, which makes rest more effective. During times of special stress we should lie down whenever possible, even though for only a few minutes, and if possible "drop off" in a doze. When conditions which have necessitated overwork or loss of sleep have passed we should take advantage of the first opportunity for getting extra sleep, devoting a day, or more, wholly to sleep. Natural inclination, instinct, prompts us to do this, but pressure of work, or other circumstances, may make us resist this natural, and right, in-

clination, continuing at work when we should be sleeping. Which would be a mistake. When we are needing sleep we can not do anything more profitable than sleeping.

Insomnia.

Insomnia, sleeplessness, has many causes. Its prevention and cure both depend chiefly on avoiding or removing its cause in each individual case. This may require the services of a physician, although in many cases much—perhaps most—must be done by the patient himself under instruction and supervision of his doctor. Perhaps the commonest cause of sleeplessness is **mental over-activity,** thoughts and emotions continuing active enough to prevent sleep. Doubtless all of us have such experience at times; but with a good many people this easily becomes a habit, when it may lessen the amount of sleep to a serious degree. The prevention of this, also its cure, must be done almost wholly by the person himself. Medicines for inducing sleep, hypnotics, are here worse than useless; they are dangerous, drug addiction often commencing in this way. The remedy that is most effective here is mental **management** and control. When time for sleep arrives mental activity should slow down; we should switch off,

as it were, the thought-currents of the day, and switch on others of an entirely different kind, such as promote mental tranquility and serenity. As we go to bed we should put aside our daytime thoughts as we put aside our daytime clothing. All this may not be easy to do—certainly will not be if we have acquired the bad habit of "taking our business to bed with us"; but it can be done if we will simply persist in the necessary effort; and with persistence all will become constantly easier, until finally we may be able to change our thought-currents as easily and as satisfactorily as electrical currents are changed with a key-board. And such success will be worth any effort it may cost.

Success here will depend largely on the kind of thought-currents we attempt to switch on. The commonly advised counting, or counting imaginary sheep jumping a fence, is seldom satisfactory, because as we thus count our thoughts may, and usually do, soon get busy with our affairs, while the counting goes on mechanically. Or if we succeed in keeping our mind on the monotonous counting it is done with so much effort that this effort keeps us awake. A better way is to engage the mind with thoughts that are inviting and mildly pleasurable enough to keep the thinking somewhat

consecutive, yet changing perhaps, drifting from one unimportant subject to another, the mind **loitering** along, as it were, listlessly, as it does when we are day-dreaming.

There is a so-called insomnia that is not insomnia at all. It is really **fear of insomnia,** dread of wakefulness, that of itself can keep one awake, more or less. This is a rather frequent kind of trouble, affecting mostly nervous people who are given to apprehensiveness, "borrowing trouble," "crossing bridges before they get to them," etc. Fear of insomnia gets on the nerves of such people and makes them truly miserable. But their distress is mental rather than the physical distress that goes with true insomnia. It is fear and dread of wakefulness that constitutes their trouble far more than loss of sleep. "I go to bed dreading the long hours of wakefulness," is a common expression of these people. Now, dreading wakefulness amounts to much the same as **expecting** it; even more, it **invites** wakefulness. And when we go to bed expecting to remain awake we probably shall, at least for a time. For we are made that way; that is "autosuggestion," and we are all autosuggestable, more or less. Which means, in common language, that we are quite likely to do the thing we **expect** to do.

Such people should go to bed **expecting to go to sleep;** then engage the mind with thoughts of how comfortable they are, resting from their labor even though not yet asleep; reflecting perhaps on the misfortune of the many people who must not only remain awake but must also work throughout the night, while they may rest and sleep; doctors and nurses ministering to those who are kept awake by suffering, all of whom would be glad indeed of opportunity for sleep. And then perhaps the next thing of which they may be conscious shall be the daylight of next morning; for they have been long hours asleep, more hours probably than they suppose; for time drags for those who are awake in the night, such time seeming much longer than it really is. If such people were sleeping no more than they **suppose** they are, their health would be impaired far more than is usually the case. In fact, the health of such is usually unimpaired from what little sleep they may have lost. A trustworthy guide as to whether one is getting sufficient sleep, is usually one's **weight;** when our usual weight is maintained this would be good evidence that there is no serious diminution in the amount of our sleep. Those who suppose they are not sleeping enough, should weigh themselves once a week, for a few times,

and if they are maintaining their weight they should accept this fact as good evidence that they are not losing enough sleep to impair their health; therefore the little sleep they are losing is of little consequence; then put the whole matter out of mind, stop thinking and talking about their sleep, forgetting the word "insomnia." In a word, the chief need of these people is to be convinced that they are **mistaken** in supposing they are getting insufficient sleep. That accomplished and they are "cured."

Medicine for making one sleep should never be taken except under the strict supervision of a physician, and then very guardedly, and discontinued at the earliest possible moment. There is no medicine that can cure insomnia. The most that medicine can here do is to give a measure of temporary relief; and help perhaps somewhat in putting to rights organs and functions which may be disturbed and interfering with sleep. Drugs which cause sleep are powerful and dangerous, therefore their use should be supervised by a careful and painstaking doctor. Otherwise there may easily be very serious results, even death—results far more serious than insomnia. When such drugs are taken again and again, as they too often are, the body soon comes to **demand** them; cries for them

most urgently and persistently. If this is yielded to it will be only a question of a little time when the body will not be denied this indulgence. Then a "drug habit" has been acquired, which is a very debasing kind of slavery, with the chances decidedly that the one thus enslaved never shall regain his liberty. Thus is often acquired the opium habit, morphine habit, and other drug habits.

V.

DIVERSION; PLAY.

"All work and no play makes Jack **dull**"—takes the keen edge from life. And life without this keen edge is like a dull tool, work with which is uphill business with results unsatisfactory.

A continuous grind of anything, even pleasure, becomes monotonous; and monotony is killing to best endeavor; it makes us stale; puts a drab color on life. Work then becomes a drag; we work without much heart in our task; the hours are long, and we wish for the end of the day—like the galley slave who goes "scourged to his task."

On the other hand, after a period of diversion, change, play, we go back to our task with renewed zest, energy, and efficiency; with a firmer grip on our work, perhaps with real enjoyment. And we then do our work easiest, and best. All of which seems to hint that we need such change; that diversion, play, is a **necessity** rather than a luxury.

The dead level of monotony seems to be contrary to nature; night alternates with day; tide ebbs and flows; seasons come and go. All our physiological processes are fluctuating, in

waves, up and down. The heart beats and rests; the lungs expand and relax; the stomach does its work and then rests—in all there is frequent change; there is no dead level. Clearly we were made for change, not for monotony. If we disregard this fundamental law then health and efficiency can not be at their best. Of course we can **exist** without diversion, can "get along somehow," thanks to our adaptability; but that is hardly living.

Most of us perhaps do not need to be reminded of all this; our instinct resents monotony; the sense of need of diversion, desire for change, beguiles us from our work. Yet many people suppress, or try to, this normal desire because of erroneous notions; excessive ambition keeps many on their job when they should knock off and play; some think they can not **afford** to play; others declare they do not **need** a holiday, which would be waste of their time, such almost worshiping "business" in their excess of zeal for their work. Still others remain at work because of difficulty in getting away from it—no one else can take their place, they say. Conscience keeps some at their work when they should play.

The chief mistake here, the root of the matter, is usually a feeling that recreation, play, is a

luxury, a foolish luxury to some, and not the **necessity** that it really is. Some seem to think that play is even sinful, at least for grown-ups, certainly a thing to be looked upon askance. As long as these erroneous notions are held fast such people will not make the effort, perhaps sacrifice, necessary for breaking away from their work. Therefore the chief need here is correction of wrong ideas, a "change of heart" as it were. They must first of all come to believe that diversion is a **necessity**—necessary for their health, necessary for their top efficiency. These busy men manage to meet other necessities, and doubtless they would also manage this when they are really convined that diversion is a necessity.

We need diversion, change, every day. We shall be the better for having some diversity in our work, shifting from one thing to another, several times during the day. If our work is sedentary such change should be to something that is more active; if our work involves much activity, then the change should be to something less active. By such simple means we may avoid the killing monotony of a steady grind at one thing; and usually this may be accomplished with a little thoughtful management.

Some people would have us believe that

change in our **work** is all the change we need. Possibly there may be a few such exceptional individuals, but it's doubtful. If there are such they have lost a natural, and a valuable, attribute, the desire for and enjoyment of **play,** recreation, that we all have during childhood, and that may be, and should be, retained throughout our entire life. To retain this play instinct—for it amounts to an instinct—we simply need to **use** it, need to play from time to time. Otherwise we may possibly lose all desire for and enjoyment of play; which would be unfortunate, to say the least. For we need from time to time the **complete** change that can come only from quitting our work entirely and taking a turn at some diversion, play, which shall make us **forget** our work, for the time.

Play and pleasure being running mates, belonging together, we should choose for our play something which shall give us pleasure, of course; something that we like individually to do. To choose something for diversion only because we think it would be "good for us," or because someone else likes to do it, probably would not prove to be very satisfactory. Choose something for your diversion that you **like to do yourself.**

There being wide diversity of individual taste

in this respect there may be wide diversity in choosing our play. What I may choose for my diversion might be widely different from what you should choose for yours. For example, we know that many men—and some women—get keen enjoyment and much benefit from "roughing it"; they go to the mountains or other desert places, far from all of the conveniences and nearly all the comforts of civilization, live in the most primitive way, endure much hard work, cold, wet and many other discomforts—and call it **fun**! I have myself done just that. I need hardly add that all people are not built that way; and those who are not certainly should choose something else for their diversion.

For our every-day diversion we should choose something that is easily within our reach; something which may be taken up easily, with as little inconvenience as possible. Otherwise we would be very apt to neglect it; for we should have our diversion as regularly as we have our work. Such diversion may be very simple, yet enjoyable, and effective. For example, I know busy housewives who get out of their homes and away from their cares and perplexities for an hour or two, at least, every day; attending to their marketing, say, instead of using the 'phone; or they "drop in" for a chat with a

friend, or make formal social calls; go for a walk; or have a flower garden to look after, or some other outside interest that serves the purpose for getting them out of the house and away for a time, thus breaking the monotony of their daily round. For the care of a home may become very easily a monotonous and killing grind, that may be avoided, or at least ameliorated, by such simple means as I have indicated. I have personally seen a good many examples of such habits of diversion; the healthiest, happiest and best rounded mothers and housewives I have known have had this habit.

A hobby may be an excellent means for providing us with the diversion we need, for hobbies are usually ridden with much interest, enthusiasm, and pleasure. Doubtless we should all be the better for having a wholesome hobby or two, which would entice and divert us from our work from time to time. Something of this kind is absolutely necessary for those who become so absorbed in their work that they overtax their strength, which when long continued so often brings disaster. Such need something that shall **beguile** them from their work, making them forget it for a time. A hobby may do this most satisfactorily. Perhaps there is no better hobby for this than golf, for

those who enjoy golf. This game is specially well adapted to those whose work is indoor and sedentary.

To specify hobbies seems hardly necessary, however, hobbies being so widely varied, and the choosing of a hobby so dependent on individual taste and inclination. But I may add in a general way that a hobby should be something easily available; something that may be taken up and laid aside without much inconvenience or trouble. As we need diversion every day our hobby should be available for daily riding. Also, a hobby may be very simple yet satisfactory and effective. For example, I know a busy doctor who having a taste for working with tools gets his needed diversion largely from tinkering with his automobile, and doing the many odd jobs that so often occur in and about every home. We may not need to go far afield to find a hobby that shall answer the purpose of a diversion.

Whatever we may choose for our hobby should be something widely different from our vocation; something that shall bring change of interest and activity as complete as possible. If our work is indoors and sedentary we should choose for our diversion a hobby that shall take us outdoors and keep us active. We shall

then be getting also several other things which we very much need; good outdoor air to breathe, health-giving sunlight, and the subtle and wholesome stimulous that goes with the great outdoors. On the other hand, if our vocation involves much activity we should choose a hobby of a more quiet kind. One of the best of such is music, for those who have a taste of music. Here another example is a doctor friend of mine, a busy country practitioner, who finds in his violin the very enjoyable, refreshing and satisfying diversion he needs, beguiling him from his absorbing and harrassing work as nothing else can. Another diversion that is well fitted for those of active vocation, is reading. While this could hardly be called a hobby, yet many people find in an interesting book, an easy chair and a quiet corner a combination hard to beat as a means of diverting and refreshing them after their day's work. Likewise the "movies", and other similar entertainments provide diversion that is well fitted to many people. But the unwholesome atmosphere, both physical and moral, that so often goes with such entertainment, may easily overbalance their benefits.

In marked contrast to the movies and similar means for diversion, is the automobile, which

takes us into the wholesome, health-giving out-of-doors. There is no other means for wholesome diversion that fits so many people as does the automobile. This seems to me to be the most valuable attribute of this marvelous machine. Multitudes of tired mothers, who are kept too much indoors, with their daily round of monotonous and wearing cares, have found in the automobile exactly what they need for restful diversion. To such it is a real godsend. The good outdoor air and sunshine, the exhilaration of rapid, easy travel with its constantly changing scene, and all the while comfortably and restfully seated, is certainly a combination hard to beat for diversion for tired mothers. Add to this the picnic lunch in the woods, the swim in lake or river, and the several other accessories which often go with an automobile outing for the family, makes up a diversion as near perfection as could be hoped for reasonably. It is specially well adapted to almost every over-tired indoor worker.

What we do every day, habitually, influences our health far more, either for good or bad, than does what we do only occasionally. Therefore the annual vacation is less important for our health than is the diversion we get every day. The annual vacation is rather a luxury,

usually, than a necessity. The pleasure that is possible from the annual vacation is perhaps its chief purpose. Wholesome pleasure of this kind is certainly beneficial. Getting wholly away from our work for a few weeks, and the freedom from the cares and responsibilities, which should go with the change, is enjoyable and refreshing. After such experience we go back to our task with renewed energy and efficiency. But the benefit is usually temporary; we soon get back into the old groove where we were before going away. Whereas the beneficial effects of daily diversion are permanent.

Too often, however, the annual vacation is not very pleasurable or refreshing; as when it is taken chiefly because one's employer grants the time for it; or because it is the fashion, the thing to do. Still others work too hard, or unwisely, at their pleasuring, returning to their work at the end of their vacation unrefreshed, perhaps even more tired than when they left it. Another considerable class of people find so many inconveniences that are inseparable from their vacation that they put in much of their time expressing their displeasure and dissatisfaction. This is the case oftenest, perhaps, in those who are past middle life, the comforts and conveniences of home appealing to such far

more than to those who are younger. The pleasure and benefit from a vacation is usually in proportion to the age, becoming less with the advancing years. Those who get little or no pleasure from their vacation, perhaps returning home more tired than when they left, would be as much benefitted, possibly more benefitted, by remaining at home. In a word, if one's vacation is not enjoyable, it is hardly worth the price; if wholesomely enjoyable it may be worth whatever it may cost.

Success or failure of a vacation depends largely on good judgment in choosing what we shall do with our vacation. We should be guided chiefly by our individual inclination and taste, of course. To make a European tour when we don't like to travel, perhaps doing it chiefly because it's "the thing", would not be wise, to put it mildly; to go on a hunting and fishing trip when the comforts of home appeal to us more than does "roughing it," would be foolish. It may be said in a general way that the more active kinds of vacation fit best the young and the middle-aged; the less active kinds those past middle life. Touring by automobile, a highly commendable kind of vacation, fits well a vast number of people of every age and condition.

Few would make a mistake in choosing such a vacation.

The health of many people would be benefitted more by their vacations if they would divide the time devoted thereto by taking several short vacations throughout the year, instead of a single longer vacation. Indulging the play spirit only once a year is hardly frequent enough to keep this spirit thoroughly alive and responsive. More frequent indulgence is preferable. A day or two "off" at monthly intervals, say, would be a better way. Week-end outings, if of the right kind, would be still better. Besides, the keenest pleasure and relish of a vacation is of short duration, and is during the first few days, which we enjoy, usually, most of all. Why not limit our vacation to these few first, and best, days, and have them more frequently? I know from personal experience and observation that this may be both practicable and satisfactory.

VI.

SUMMARY OF HEALTH HABITS.

As a conclusion to the foregoing a summary may help to simplify the main points, and to fix them more clearly in the reader's memory.

Our habits determine very largely what our health shall be, right habits making for health,

wrong habits making for disease. We may acquire any habit we choose, therefore may choose largely whether our health shall be good or otherwise. The habits most necessary for the maintenance of good health are those that pertain to our food, our work, our rest, and our diversion. Food being the source from whence comes our power, also the material for the repair of the wear of our bodily machinery, it is necessary for best results that it shall be of right kinds, sufficient in amount, and sufficiently diversified. Food includes the air we breathe, the most important of all food, hence the need that the air we breathe shall be pure, also that we shall have such air as near all the time as possible, night as well as day. The purest air being outdoors, we should be outdoors as much as possible. Water is also a food in the sense that it is necessary for our proper nutrition, and is next in importance to the air we breathe. Water is the only drink we need, and our sense of thirst will tell us accurately enough when we need it, and how much. Water drunk while eating is not only harmless but beneficial, yet it may be harmful indirectly by favoring hasty eating and insufficient mastication, which may be easily avoided by simply refraining from drinking while food is in the mouth. All other

kinds of food are included in three classes, fats, carbohydrates, and proteins, which we need in proportions of about 30 per cent fats, 60 per cent carbohydrates, and 10 per cent proteids. These proportions can be maintained with sufficient accuracy, constituting a "balanced ration," by eating a generous variety of the staple kinds of food, if necessary cultivating an appetite, as we may, for such variety; appetite will then choose accurately enough the amount we need of each article for proper nutrition. We are nourished best when we eat a rather wide variety of food, including articles that are eaten uncooked, as such contain some of the vitamins that we should not get otherwise.

Our body machinery having been made for doing work, we can not long remain healthy without activity, exercise. We may get sufficient exercise from our vocation; but if we do not, then the deficiency should be made up from other kinds of activity, calisthenics answering the purpose when nothing else more inviting is practicable.

Rest, the opposite of work, is also a necessity for health and efficiency, as it is while we rest that repair and re-adjustment, as it were, of our bodily machinery is being accomplished; also,

it is then that we accumulate power for doing our work, much as a storage battery is "charged." The best kind of rest is sleep, for during sleep, we rest most completely. The amount of sleep we need varies individually; also varies with the amount and kind of work we do. A gauge for the amount needed is the feeling of refreshment, renewal of energy, fitness and readiness for our task at the beginning of each new day. If we do not have that feeling, we have not had sufficient sleep.

Diversion, change, recreation, is a **necessity** for health, not a luxury, monotony being contrary to nature's laws. We need diversion, at least a change in our work, every day, or oftener. The kind of diversion most effective depends upon individual taste and preference, the one essential being that it shall be something we enjoy doing.

Acquiring the habits necessary for insuring these few essentials for good health is not a difficult undertaking. Once they are acquired they may add years to the length of life, and besides will greatly increase efficiency and happiness.

VII.

THE SELF-DEFENSIVE ABILITY OF THE HUMAN BODY.

We hear much these days of germs that cause disease of many kinds; that we are surrounded and assailed all our lives by vast numbers of these enemies. Yet we live on, and may be none the worse because of them, not a few of us living to a "green old age," despite this ever-present danger. Likewise we live and thrive in the midst of many other things that can injure or destroy us; we can endure the extremes of Tropic heat and of Arctic cold and be none the worse for such experience. Men survive severe injuries, frightful mutilation, go "into the very jaws of death," and live on, as has been so often exemplified in warfare. In a word, mankind is very hard to kill, when given a fighting chance for life. Otherwise the human race should have long ago become extinct.

All this is because the human body has a marvelous ability for **taking care of itself,** a self-defensive power that puts up a very stiff fight and is not easily overcome, when it has anything like a fair fighting chance. An account of how this is done has possibilities for a

very absorbing story, the telling of which is worthy of greater skill than I possess. However, some account of it seems here advisable as a conclusion of this discussion of health habits.

Certain organs and other parts of the human body are equipped with means whereby it protects itself against many of its enemies and other injurious influences, including nearly all kinds of injurious germs, and for the repair and healing of wounds and other kinds of injury. These beneficent forces are chiefly in the blood and some of the secretions, yet they are- widely distributed elsewhere. The combined forces of this kind constitute a "home guard," or a "standing army," that is always on duty, watchful for the invasion of enemies, and quick to put up a fight whenever occasion arises. This "home guard" is called Resistance, and is an invaluable help in times of trouble.

This home guard, Resistance, is kept strong, capable, up to full fighting strength, and most efficient, **only** when we have right health habits, live in conformity to the laws of health. On the other hand, if we do not conform to the laws of health Resistance is weakened, soon falls below full fighting strength, and then our enemies may easily invade and get the best of

us; and if we survive we shall not be in best condition for repair of the damage that may have been done. Nothing else can do so much to prevent sickness as living hygienically. If we get sick, or are injured, nothing else can do so much to help us get well again. Thus hygienic living amounts to a kind of health and life **insurance**; the insured receiving his "sickness benefits" without getting sick; and his life insurance payment during his own lifetime. It is also like an **annuity**, its benefits paid in fitness for, and efficiency in, our work, and the consequent success and happiness.

All of which benefits we may have by simply acquiring a few habits of the right kind; habits that are not difficult to acquire nor burdensome to maintain.

VIII.

OVER-ANXIETY ABOUT ONE'S HEALTH.

Most people perhaps do not give enough attention to their health; but some give **too much.** The one is about as bad as the other. The middle course is the better way. Too much attention leads to anxiety, worry, and often to an entirely unwarranted fear that something is seriously wrong with one's health, when there may be nothing wrong at all. Counting one's own pulse, frequent examination of one's tongue for a "coat," witchfulness for pain or other sensations supposed to be indicative of disease, etc.—such habits lead to a morbid **mental** condition, that is very unpleasant, at least, and may become so harrassing as to constitute a mild kind of mental unsoundness. A person thus afflicted is called a **hypochrondriac;** for short, a "hypo." Such solicitude can not possibly do any good. Any real symptoms that might be discovered by the person himself would have small chance of being interpreted correctly, while imaginary symptoms would have no value. Any treatment that he might himself institute on a basis so flimsy would have small chance, if any at all, for doing any good. Besides, watching too clearly our bodily organs

and functions seems sometimes to make them go wrong; it has an effect that is in some way disturbing. Our body functions best when not too closely watched, particularly by ourselves.

If you think there's something wrong with your health the logical thing to do is to consult a doctor, the best available, and have the question settled definitely and conclusively, then abide by the decision, whatever that may be.

We should not expect too much from living hygienically. We may conform to all of the laws of health and yet not always feel at our best, up to par. All of us have "good" days, and others that are not so good. We can not be "up to concert pitch" all the time, for good and sundry reasons, considering the intricacy of the human body, with its many fine adjustments, harmony of numerous functions, and other conditions necessary for smooth running of the human machinery. Bearing in mind this exceeding complexity it is very remarkable that they do not get out of perfect order and harmony easier and more often than they do. Slight and obscure disturbances of perfect order and harmony must sometimes be inevitable. Such disturbances when temporary are usually of little consequence, should be taken as matters-of-course, and ignored for the most part, remem-

bering that our body has much ability for putting itself to rights, if we will but give it a fair chance and a little time. If these times of feeling "out of sorts" do not soon pass, then you should consult your doctor, for nature might be needing assistance that he could render. The point here is, we should not take too seriously, or be too much disturbed by, slight and transient disabilities, which nature is usually quite capable of remedying unaided; yet we should not neglect such disturbances if they persist.

PART SECOND.

I.

CHOOSING YOUR DOCTOR.

While we may greatly lessen our need for doctors by conforming to the laws of health, we should not expect that we shall never need them at all. For accidents may happen, and other conditions may arise, that shall be beyond our power to personally control, and that shall make necessary the services that can be rendered only by doctors.

When such need arises we turn to doctors as instinctively as we seek food when hungry. The need for doctors seems to be inherent in the race. So there have been healers, "medicine men," doctors and remedies as far back in the history of mankind as we have record; and this will doubtless continue so to the end.

When we need a doctor the one we choose may become a matter of much significance. The choice may determine whether we, or those who are near and dear to us, shall live or die. Therefore we should choose carefully, with the help of every aid available. Counsel and advice may here be helpful, particularly such as only doctors themselves may give, as doctors know and

understand doctors and their work better than can anyone else. Which seems to justify what I shall here offer.

There being many kinds of doctors—homeopath, eclectic, osteopath, chiropractor, etc., besides "plain doctors," commonly called allopathic (wrongly), old-school, or regular—makes choosing difficult, and for some people very perplexing. How are we to decide which "school" is best? Help with this puzzling matter may come from knowing something of how the science and art of healing has been developed, and how the various "schools" have arisen.

The first doctors of whom history tells were hardly more than sorcerers and the like, their knowledge of disease being very meager, of course, and their treatment based mostly on superstition and other fantastic ideas and notions, with little or no reason and common sense. But as the race advanced reason and intelligence improved, knowledge accumulated, and some understanding of disease, injuries and their proper treatment was gradually acquired and formulated, displacing the cruder notions and methods of earlier times. Such knowledge and experience has continued to accumulate, and the aggregate of this constitutes at the present time modern medicine and surgery.

Strangely though, a tinge of the superstition of earlier times concerning sickness, its treatment, and doctors, seems still to linger in the minds of a good many people, who seem to believe that there is something occult, mysterious, hidden from reason, in much that pertains to disease and its treatment; that here ordinary reason and common sense do not apply. This, together with their little knowledge of these matters, much of which knowledge is often wrong, makes them easily led to accept erroneous—even fantastic—ideas and notions concerning medical matters. Still more strangely, many of these are people of education, culture and refinement, whose reason and judgment is trustworthy in other matters. They may be wise, sagacious, shrewd, rightly discerning in every other matter but this; quick to see fallacy in other matters, yet they are blind to fallacies concerning disease and its treatment. This strange state of things is doubtless largely because of the tinge of unreasoning superstition concerning disease and its treatment that still remains. The remedy lies, of course, in getting a right understanding of these matters; in learning that the science and art of healing is founded upon and directed by reason and common sense, much the same as are

other matters. To this end are the explanations I am here trying to make.

The science with which the medical profession has to do is not an "exact" science, as is mathematics, astronomy, etc., because the human body is still not perfectly understood. Not understanding it perfectly in health, naturally we can not understand perfectly the many ways in which the body's many organs and functions may become deranged, or diseased. And not understanding perfectly its derangements and diseases, just as naturally we do not understand perfectly what to do to correct some of its derangements, or to cure, some of its diseases. It may be added in passing, that while "modern medicine" does not know **all** about these matters, it knows much, and the amount is increasing constantly; so that the best that is available in these later days has accomplished, and is accomplishing, practically much that is truly marvelous in the relief of suffering, repair of injury, and the cure of disease, even though "medicine" is not an "exact" science.

This imperfection of knowledge and understanding in much with which the medical profession has to do, makes for much difference of individual opinion about many things, naturally. Hence the saying that "doctors differ";

which really is less remarkable than would be uniform agreement when there is so much uncertainty concerning so many things. Naturally, too, there has been, and continues to be, much searching for new facts, efforts for better understanding of the human body, its derangements, injuries, and diseases, and their treatment. All of which has brought forth many theories, many opinions, about this and that. Where there is so much theorizing it is hardly remarkable that some of it is not well founded in fact, is not sound, is not true. Much of this theorizing has been proved by practical experience to be not only untrue, but fantastic, absurd, even ridiculous, and has been discarded. Some of it that is still on trial, is having its day, doubtless will finally be discarded.

One of the results of this theorizing has been the various "schools of practice." Someone conceives a new idea, or sees an old idea in a new light, from which he elaborates a theory of disease and its treatment. If he is a man of strong convictions, enthusiasm, and is aggressive, he will win converts to his theory; if in addition he has business ambition and sagacity he will organize and capitalize his idea, whereby he may enlarge his practice and teach others his theory and his methods. Thus is evolv-

ed a "new school." Now, whatever is "new" appeals to a good many people, who suppose that the new, the "up-to-date" must be superior to the old; besides, their meager knowledge of these matters, together with the tinge of superstition I have mentioned, makes them credulous of new theories, especially if the new be somewhat marvelous, perhaps fantastic, and difficult or impossible to understand. So a new school may become popular, quite in vogue, and correspondingly profitable to its originator. Popularity and profits then also win many converts, particularly those who would share in the profits by becoming themselves practitioners of the 'new school;" so there are many students, who are admitted on easy terms to the course of study and preparation, established by the new school, from which they are "graduated" in due time, such time not long enough to be discouraging; then going out hopeful of winning fortunes for themselves, all are propagandists of the new school, of course.

Medical history tells of a good many new schools, all winning some followers, some being much in vogue for a time, yet they lost their popularity, declined, dwindled, and finally were forgotten, except as matters of history, because they were founded upon what proved to be er-

ror; or if they contained truth this has survived, and has become a heritage of the medical profession.

Modern medicine is widely comprehensive, including as it does, not only knowledge of structure and function of the human body, its many kinds of injuries, derangements and diseases, and the widely varied measures for their treatment, but it also involves a knowledge of chemistry, physics, electricity, psychology, etc. Surely, modern medicine is anything but **narrow.**

Yet **narrowness** is the distinguishing feature of all of the new schools of the present time, each of them contending chiefly for its **one** distinctive idea, minimizing or ignoring all else. For example, one school arose as a protest, largely, against the use of too much medicine, often in enormous doses. Certainly there was ample reason for such protest, and the new school was thus far commendable. But this school went further, evolving the idea that **all** medicines should be given in doses not only small but **infinitesmal.** Still further, they contend that infinitesmal doses are **more** potent than larger ones! Which seems much like contending that **one** is a greater number than two! How they arrived at this strange conclusion

has never become clear to most people. This one idea was dwelt upon until it seems to have turned the heads of its advocates; all else was to them, it would seem, of secondary, or less importance. Yet this school had a rather large following for a time, chiefly because of the strange credulity of many people concerning medical matters.

Another school is founded on the fact that certain manipulations, technically called **massage,** are helpful in the treatment of many conditions, and can even cure a few diseases. But this school contends that this **one** thing can cure practically **all** diseases that are curable; that no medicine or anything else than the one thing is necessary. Which seems about as reasonable as would be the contention of a mechanic were he to claim that he could put to rights whatever might go wrong with your automobile with a single tool, say a monkey wrench! Here again the narrowness of one idea seems to have blinded its advocates to pretty much everything else. Another and later school using a similar method of treatment, is founded upon the one idea that practically all disorder and disease in the human body is caused by one thing only; that is, **displacement of spinal vertebra,** proper manipulation and replacement of which is all that

is needed for the cure of everything! Narrowness and absurdity seem here to have reached their limit.

All these schools have many followers, are having their day; but it is a safe prediction that in time they will be forgotten except as odd and fantastic incidents in medical history.

Another school, or more strictly a cult, is founded upon the fact that some diseases seem to be only imaginary; at least certain cases may be cured by means of mental impressions alone; that many other diseases, possibly all, may be helped or hindered, more or less, by mental impressions of the right or the wrong kind. Certainly the effect of the mind on the body, in health as well as in disease, is a fact that has long been recognized, accepted, and practically used by the medical profession. But this new school contends that **all disease** is only imaginary; that really there is **no disease at all!** They would have us believe, for example, that if we have a boil on the back of our neck with pain that certainly would **seem** to be real, that really there would be no boil at all; that we would only **think** there was; that there would be nothing wrong but our **mind**; and that the one thing, **right thoughts,** would cure the boil! Here again is narrowness from exaggeration and perver-

sion of a truth, which seems to have blinded its followers to pretty much all other truth.

To repeat, **narrowness** is the distinguishing feature of all the new schools. Each would treat everything with their one remedy. Which certainy is not logical, to say the least.

Such narrowness is dangerous. For example, I personally know of three children who died of diphtheria, all the children in an exceptionally fine family, the parents refusing to have antitoxin used although that probably could have saved their children. But the parents insisted that the only treatment necessary was **mental treatment**! I have personally known of cases that were curable in their early stages that drifted on to incurability while absurdly narrow and fruitless "treatment" was being used. Manipulations and "adjustments" are used fruitlessly in cases that could be cured easily by surgery, or other means.

But it may be said that these new schools do cure nevertheless; at least some of the cases they treat get well. Yes, some they cure—perhaps, for each school contains some element of truth, some efficiency, that makes it suitable, more or less, to some cases. But the practitioners of these schools do not confine their practice to such a small class of cases as are

amenable to their treatment, but treat practically any and all cases that come to them, with the result that many cases get no benefit from such treatment, and some are made actually worse. These are the inevitable results of narrowness. Then, too, a good many cases that **seem** to be cured by their treatment are really not cured thereby, but are cured by **Mother Nature.** That is, some diseases, in fact many diseases, will get well of themselves, without any treatment whatever. This has been proved conclusively, many times, and in several ways. For example, a person is injured severely, or is attacked by disease, in circumstances where no remedies are available, and none are used; yet he recovers; nature has effected the cure, thanks to that marvelous power that the human body possesses whereby it takes care of itself, withstands and overcomes disease, and repairs injury—in a word, **cures itself.** If some remedy had been used meantime, that remedy would have been given the credit for the cure, naturally, although it may not have had anything to do with the cure. The remedy was only a coincidence, at best; possibly it may have actually interfered with recovery.

This beneficent self-curing power that our body has helps the practitioners of every school,

of course. It is their powerful and invaluable ally. Without its aid all that the most skillful might do would often be of no avail. With its aid, recovery may come regardless of the treatment—even despite the treatment.

Our bodies having this ability for curing themselves, it may be asked, what need is there then for doctors of any kind? Why employ doctors at all? Because, while nature can cure some diseases it can not cure all, unaided; when given proper aid it will often succeed when without such help it should have failed. Also, proper help can often lessen greatly the **duration** of disease. Furthermore, the suffering from sickness and injury can be relieved, or wholly stopped, or made much less, at least, by proper treatment in practically all cases. In other words, proper treatment often shortens the duration of disease, can render help that is invaluable in the repair of injury, can save life that otherwise should be lost, and can prevent or relieve suffering. In a word, science can help nature in her task.

Science has many and widely different means for rendering such help. Medicine, drugs, chemicals, is only one class of remedies; others are heat, cold, light—sunlight, X-rays, radium—electricity, psychology, hydrotherapy, massage,

not to mention the many and widely varied mechanical measures that are available, especially in surgery. But the new schools use only one, or at most one class, of these many measures that have been proved to be helpful in the treatment of sickness, injury and suffering. The rest they ignore. One school only uses them all. Anything, everything that science, art, or common sense has to offer that has been **proved to be helpful** in ministering to the sick or injured, this school uses. It is about as broad as the universe itself.

This school is commonly called the "old" school; which is correct enough in the sense that its origin, commencement, dates back to the commencement of civilization. But when it is called the "old school" in the sense that it is antequated, out-of-date, behind the times, "old fogy," as it is sometimes spoken of by its rivals, the "new" schools, the name is wrong. For it is the one and only school that is, and ever has been, truly progressive, broad and liberal, accepting tentatively and trying out whatever has been brought forward as new truth, including that from the new schools, and adopting whatever has been proved to be worthy. It has made mistakes, of course, being human and fallible; it has sometimes perhaps been too conservative,

too slow in accepting the new; oftener though it has been too ready in this respect, too eagerly and confidently accepting the new, on trial, which it has later had to reject. But finally, **proved truth** has been accepted and permanently assimilated, while error has been rejected when discovered. Always there has been the steadfast desire and quest for **proved** truth. The aggregate of this accepted truth, the vast accumulation of whatever has been proved to be practically worthy, constitutes "modern medicine" as represented by the "old school." In a word, this school is the sum of the long-accumulating knowledge of the human body, its diseases and injuries, and their treatment.

Almost every truly great discovery that has been made pertaining to the human body, its diseases and injuries—the circulation of the blood, disease-causing germs, anesthesia, X-ray, etc., to mention a few of the more notable, and almost innumerable discoveries less notable—nearly all have been made by members of the "old school." Practically all of the research work in this line, that is accomplishing so very much in these later days, is being done by members of this school. Practically all of the great medical colleges, and hospitals, throughout the world are manned by members of this school.

All the armies and navies and other government institutions requiring medical and surgical care, are almost wholly in the hands of members of this school. Probably ninety per cent of the medical and surgical work of the world is done by members of this school.

Students of this school are admitted to its colleges only on examination or other satisfactory evidence of character and preparatory education, after which they must take four years, at least, of technical and practical education and training, and then if they pass a satisfactory final examination they are graduated and have conferred upon them the ancient and honorable degree of "M. D." Many graduates then take still further practical training for a year or more as "interns" in hospitals; and not a few devote an additional one to three years to post-graduate study and training abroad before engaging in practice. Even then they find themselves often confronted by many perplexing problems inseperable from their professional work. All of which is in striking contrast to the methods of the new schools, who graduate their pupils after a few months of training, most of which is devoted to inculcation of their own particular and distinctive ideas and methods, ignoring much else, their graduates going

out to engage in practice with a degree of self-confidence that can come only from limited knowledge of what they are undertaking, and ignorance of the grave responsibilities with which they shall be confronted.

Possibly the reader may surmise that these statements concerning the old school may be only boasting by a member of that school; therefore I will add that every statement I have made can be verified; and that they have been made solely in the interest of truth, statements of fact, and for the purpose of helping the reader to choose which school he will employ.

Having decided upon the school, there still remains the choosing of the individual doctor.

Proper education, both general and technical, is necessary, of course, for any kind of a doctor. The degree of M. D., from a first-class medical college, assures this. In addition there must be proper professional training and practical experience. Laws governing the practice of medicine and surgery require such education, training and experience. But diplomas conferring degrees other than that of M. D., assure only that their possessors have received the narrow education that is peculiar to that particular school. Such "graduates" practice in defiance of law in many of the states.

Education and training is, however, only a part of the equipment necessary for a good doctor. There must be besides unwavering honesty and uprightness in character, a clean mind and heart. For the many temptations to questionable action, trickery, dishonesty, even criminality, inseparable from the work of doctors, can be withstood only by those of steadfast honesty, integrity, fidelity and high sense of honor. Good judgment, common sense, a "level head," are also very necessary, for in his practical work a doctor is often confronted by problems that are new, for which there is no established precedents—that are not "down in the books"—when common sense and judgment must be his main reliance. In a word, a doctor needs all those attributes that make up well-balanced and sterling character.

In ascertaining whether or not a doctor has all these essentials, one must depend largely upon one's own observation and judgment. Doctors may be "sized up" much the same as we judge other people; that is, largely by what they do.

Many people, perhaps most people, choose their doctor chiefly because he has a "big practice." They seem to suppose that this one fact is conclusive evidence of exceptional profes-

sional ability and skill, therefore they give little if any consideration to any other facts concerning the matter. While it is certainly true that doctors of exceptional ability usually have extensive practice, it is just as certainly true that doctors without exceptional ability may have extensive practice. A pleasing personality, exceptional ability for making friends—a "good mixer"—may win a large following and practice, although he may have only meager equipment in all the other essentials of a good doctor. In other words, extensive practice is only **one** evidence of exceptional ability, and alone is not conclusive. In addition there must be, for best results, all the other attributes for a first-class doctor, especially those that constitute well-balanced, sterling character.

Specialists.

The knowledge and training necessary for doctors of highest efficiency has grown to be so very large in amount that no one person can acquire all of it. Hence the need for specialists, who choosing one line of work concentrate all their time and effort to that one thing, thus becoming most proficient. So in these later days specialists of various kinds have become a necessity.

Nevertheless, there is still a place, and doubtless ever shall be, for the general practitioner, the family doctor, who must have a general knowledge of the specialties, and much besides, not the least important of which is to know when the services of a specialist are needed, and which specialist to consult. For these are matters concerning which the patient or his relatives and friends are hardly competent to judge. Besides, the assistance that the family doctor can often render the specialist, in various ways, is invaluable to the patient. Therefore, if you think you need the services of a specialist the preferable way is to consult your family doctor, and ask him to choose and call the specialist, the two meeting in consultation.

Not the least of the advantages of this method would be your protection against the hazards of incompetent specialists, particularly advertising specialists, whose assertions of exceptional ability and skill might easily deceive you, but would not deceive your family physician.

II.

THE LIMITATIONS OF DOCTORS AND MEDICINES.

While a competent doctor can do much for the relief of suffering and the cure of disease, he may not be able to do all that you may desire, or expect, him to do. Death being certain for all of us, at some time, and a doctor being in attendance usually when death arrives, it is inevitable that even the best of doctors must sometimes lose patients. That which may **seem** to be lack of ability and skill may not be so at all. Perhaps nobody could have done better than that which was done. All of which seems self-evident, should go without saying. Yet doctors are often blamed unjustly for failure to cure, and for deaths. The best that can be advised for avoiding this is good judgment and care in choosing your doctor, employing only such as win, and are worthy of, your full confidence, calling other doctors in consultation if any doubt arises, and then abiding by the results, whatever they may be.

Many people have a quite unwarranting confidence in the power of medicine, drugs, for the cure of disease. They seem to think that there must be a definite and sure remedy for

every disease, and that a doctor's ability consists chiefly of fitting the right remedy to the right disease. But the practice of medicine is far less simple and certain than that. There are very few drugs that cure disease. Quinine can cure malaria; antitoxin can cure diphtheria, generally; salvarsan can cure syphilis, perhaps; and sulphur can cure the itch. And that is about as far as we can go, in such positive assertion. There is a considerable number of drugs that are helpful, more or less, in the treatment of disease; but it can not be truthfully said that they cure. Some of them assist nature in her efforts to cure; others relieve suffering, lessen the distress of sickness. Then there is a vast number of **alleged** remedies and cures, the reputation of which depends upon nothing more substantial than conjecture, assertion, or the coincidence that they have been used in the treatment of certain diseases and some of the patients have recovered! The remedy used being credited with a cure that had really been accomplished by nature's efforts. Even more: some of these alleged remedies are harmful rather than helpful, interfering with and hindering nature in her curative efforts. The list of such medicines has grown to be very large, for various reasons, one of them being

a legitimate and commendable desire to discover new remedies, which has prompted to the "trying out" of many different things. Another and less commendable reason is **commercialism,** which has induced some manufacturers and dealers to put upon the market new **alleged** remedies, and to continue to sell older ones that have proved to be worthless. Many competent doctors assert their belief that there are not more than two score of drugs that are **certainly** helpful, of **proved** efficiency, in the treatment of disease, and that all the rest might be thrown into the sea, and mankind would be none the worse for the loss! This may be an extreme view of the matter; nevertheless it is significant of a well-founded skepticism.

It may be well to remind the reader in this connection that competent doctors are not confined to the use of drugs alone in their treatment of disease and injury, many other things being often far more helpful than drugs; and that using few drugs may be a mark of exceptional efficiency in a doctor.

III.

SELF- MEDICATION; "DOCTORING" YOURSELF.

Before one can know what treatment is needed one must first know what the trouble is, what disease is present. And that is often a most difficult matter to determine. Even the most skillful doctors are often puzzled, and sometimes find it impossible to decide beyond doubt. In fact, often a doctor's first and most important task, as well as the most difficult, is finding out **certainly** what the trouble is with his patient—making a "diagnosis." Being so very important, and often so difficult, for even trained and experienced doctors, it seems hardly necessary to add that it would be unwise, to say the least, for you to attempt to do this for yourself, that is to decide what your trouble is. And without first knowing this you can not know what treatment you need. In such circumstances treating yourself would have exceedingly small chance of doing any good, and might easily do harm. Even doctors seldom attempt to treat their own ailments, for good and sufficient reasons, chief of which is that a sick person is not competent for assuming the responsibilities necessary for the proper treat-

ment of the sick, particularly if the sick person be himself. So when doctors themselves get sick, except with minor ailments, they have other doctors to take charge of their case, and rightly so.

You may say that you **know** you have a certain disease because you have the symptoms of it. That is not always conclusive, by any means, as many different diseases have symptoms that are similar, and in some diseases the symptoms are identical. For example, pain in the back, which many people suppose is a sure symptom of kidney disease, **may** be so, but it may also be a symptom of several other diseases. Yet many people conclude from this one symptom that they have "kidney trouble," and take much "kidney medicine," when really there is nothing at all wrong with their kidneys, the pain in their back being from some other trouble wholly different. Again, a good many people suppose they have "heart disease" because they sometimes have "palpitation"; yet palpitation is oftener a symptom of **indigestion** than of disease of the heart. In both these examples, as well as in many others that could be given, only doctors, with their special training, knowledge and experience could determine certainly which

one of several possible diseases the patient really has.

Then, too, you may **suppose** you are sick when really you are not. This mistake is rather common. Such people usually take much medicine, spend much money for this and that kind of treatment, all of which is wholly unnecessary, useless, and **may** be positively harmful; not to mention the expense, the mental distress and other discomforts and disadvantages arising from their mistake. In some of these cases it is very difficult for even the most experienced and skillful doctors to determine certainly whether or not there is real disease. It is utterly impossible for the "patient" himself to determine this. He can only **guess,** with the chances decidedly that he shall guess **wrong.**

If you are sick, or suppose you are, don't guess about it, but consult a doctor and be sure.

IV.

PATENT MEDICINES.

People who doctor themselves usually take much medicine, and of many kinds, trying this and that, whatever anyone may recommend. They seem to think that there must be some one medicine that can cure them, and that by taking enough different kinds they may hit upon the right one. Which is much like trying to find a supposed needle in a mythical haystack!

This desire and demand for much medicine makes the opportunity for the inventors and manufacturers of patent medicines, who take advantage of it usually for purely commercial reasons. For the manufacture and sale of patent medicines is often very profitable. Large fortunes have been made in this way. This makes the business very attractive to many men. It seems to be especially attractive to men who are unscrupulous as to how they make their money. Some, at least, of the people engaged in the patent medicine business will say and do anything, regardless of truth and right, that may increase their sales and add to their profits. To them it is wholly a matter of "business," unscrupulous business. Their motto

seems to be, "anything that may make the business 'go.'"

This may seem to be an extreme statement of this matter. Nevertheless its truthfulness has been proved conclusively, and many times. The following example, personally known to myself, while perhaps exceptional in some respects, yet is typical of the patent medicine business as a whole. I once knew a showman, in the days of the "Eden musees," the owner and manager of a "string" of such shows in western cities. He was energetic, ambitious, and a successful business man, in a way. During the summer months there was a "closed season" in his show business, when no profits were coming in, of course, which was not to him at all satisfactory. This defect in his business he wished to correct; he would use this period of idleness and make it profitable. So he decided upon a scheme for inventing, manufacturing and selling a "patent" medicine. His "invention" consisted chiefly of a story of an uncle of his, an African explorer, who during his travels found the natives using a certain herb which cured many different diseases. His uncle had written an elaborate and careful account of all this, had preserved samples of the herb (so ran the story) all of which, with other possessions, had

been sent to relatives in England, after the death of this uncle in the jungle. This "valuable" information had finally come into the hands of himself, this nephew, who now was to give to the world this "marvelous remedy," this "boon to suffering humanity" (For a dollar a bottle). The herb was being collected in the African jungle, with much difficulty and danger, imported to "extensive laboratories" in America, built, owned and maintained at enormous expense, devoted to the manufacture of this one medicine exclusively; and much more to the same effect, all being printed, and profusely illustrated to fit this astonishing story, and freely and lavishly distributed, by means of traveling free street shows, thus attracting the crowds that bought his medicine.

Not a word of this marvelous story was true, as frankly, voluntarily, and **boastingly** admitted by this "inventor"—excepting only that he had had an uncle! His "medicine" consisted of a common weed, having a pronounced and not unpleasant taste, collected from the roadside and waste places within a few miles of the city, where was located in an unfrequented alley his "factory," a one-room shack. Here was added to his collection of weeds some cheap whiskey, flavoring and the remainder, the largest ingre-

dient, was hydrant water. From these was made an infusion, that was put up in generous-sized bottles, with an elaborate label bearing a long list of names of diseases for which it was a "sovereign remedy", etc. The stuff was sold with the help of his show people, small groups of cheap actors and musicians, who with a free show on the streets or in front of their tent pitched on a vacant lot collected a crowd of people, when a "barker" sold the "medicine," with much positive talk of the cures it had accomplished, and reckless promises of what it could do for the purchaser. And he sold much "medicine"; the venture was a decided "business success," on which the man prided himself; brazenly boasting and jesting about his successful deception of the "guys" who had so readily "handed him their coin," etc., thus adding insult to his outrageous fraud!

This doubtless is an extreme example of the patent medicine business, which nevertheless is all tainted, more or less, with exaggerated and unwarranted statements, at least, and not infrequently with gross deception and fraud. Otherwise the business could not be made to pay the attractive dividends that it sometimes does. And dividends is the one attractive feature this business has for those who engage in it.

The chief ingredient of many of the most popular patent medicines has been proved to be alcohol. Yet alcohol cures no disease, according to those most competent to judge this matter. But alcohol can certainly make one **feel** better—for a time—which is dangerously deceptive, as it has led many people to acquire the alcohol habit, from taking patent medicines, which may easily become a worse misfortune than is most disease. Other patent medicines contain opium, morphine, cocaine or other powerful and dangerous drugs, which by their temporary soothing and pleasant effects deceive the taker into supposing that he is being benefitted thereby, when in reality he is being seriously injured by acquiring a slavish drug habit, if the medicine is taken very long, which may easily prove to be a far more serious matter than the trouble for which it was taken.

Many of the inventors of patent medicines would have you believe that their product contains rare or secret ingredients or combinations that are not known to the medical profession generally, if at all; that in their product you get something that you can not get elsewhere. This is seldom, if ever true, as has often been proved by chemical analysis of such medicines, which has shown that they usually contain only

old and well-known remedies, or alleged remedies, many of which have been proved to be inert and worthless, and others of questionable potency, to say the least. I believe that I am safe in asserting that nothing has ever been found in any patent medicine that was not known to the medical profession; and if it was of proved efficency, is in common use.

Whatever popularity and seeming success is attained by patent medicines depends almost wholly upon the advertising by which they have been "boomed." The business success of these enterprises, the profits and dividends, if large, depend wholly on advertising, without which the sales would be small and the business unattractive. Therefore, advertising is an exceedingly important part of the patent medicine business. In fact, this is its chief interest. Some of the most skillful and expensive advertising is done by the various patent medicine concerns, without which their products would never become known widely enough to be profitable. Such advertising is usually regardless of the truth, any statement, assertion or boast being made that may increase sales and profits.

The "testimonials" of cures that make up so large a part of the advertising of many pat-

ent medicines, have little if any real value, as such testimonials are often obtained by unfair, tricky, or fraudulent methods, usually being written by the advertiser or his agent, and signed by the patient without his understanding or knowing clearly, in some cases at least, just what the statement means. In other instances the patient feels better while under the influence of the medicine because of the alcohol it contains, and supposes he is getting well, when really he is only mildly **drunk**; or he feels comfortably "dopy" from opium, morphine, cocaine or other similar drug in the medicine he is taking. Testimonials from people who are drunk or dopy can not have much weight.

In a word, people who "fall" for patent medicines are usually being simply "worked" for their money. So far as their health is concerned results would have been much the same had they taken no medicine at all.

V.

PERIODIC EXAMINATIONS.

There are a few serious chronic diseases that commence so mildly and insidiously that for a considerable time the victim may be quite unconscious that anything is going wrong with him. He may feel quite as well as usual for a time, although serious trouble is creeping on, like a thief in the night. During this period if the disease is discovered and properly treated, as it usually may be by a competent doctor, it may be cured, or its progress arrested, at least, which may amount to a cure practically. On the other hand, if it is not discovered and properly treated during this early period it is all but certain that it shall become wholly incurable and end in death.

These insidious diseases may be easily discovered by a competent doctor early enough for treatment to be effective. But the only way by which this may be assured is to have a thorough and complete general examination made about twice a year, during the period of life when such diseases are most likely to commence, that is from about the thirtieth to the fiftieth year. At this time of life the responsibilities and stress of human endeavor, espe-

cially of business men, is usually greatest, which often taxes to the utmost the human machine, resulting in a breakdown at some of its most vital parts in a good many cases. The organs that are most endangered by such stress and strain are the heart and kidneys. But usually long before these vital organs become seriously diseased certain warning signs and symptoms may be discovered by a careful examination, when a change in the habits of life, together with proper treatment, may prevent what would otherwise become an incurable disease. Evidence of the practical value of such examinations is the fact that some of the leading life insurance companies have such examinations made of their policy holders at the company's own expense; and they doubtless find that it pays, else they would not continue the practice, as they do. Even more may periodic examinations pay the policy-holder.

VI.

THE CURABILITY OF CANCER.

It is a common belief that cancer is **never** cured; that when it appears to be cured it always recurs; that if a person once has cancer it always ends in death, finally.

This is a mistake. Many cancers have been cured, permanently. Every surgeon of much experience will confirm this. Many such patients have lived years afterwards, finally dying of something else.

But in order to cure cancer it must be removed EARLY, before it has "got a good start." At this time many cancers, not all, may be cured, and cured permanently, if properly treated. But if proper treatment is neglected at this early period, or if it is treated improperly, cancer is SURE to become incurable. Cancer never "gets well of itself," as do many other diseases; its natural tendency is always to grow worse, to spread, and finally destroy its victim.

Cancer commences usually in a very insidious manner, as a simple and small abrasion or trifling sore on the skin or mucous membrane,or as a small tumor, "lump." There may be very little or no pain at all, at first; there may be no discomfort or inconvenience from it in any

way—it may be hardly noticeable, by the victim or anyone else. IT IS DURING THIS EARLY PERIOD THAT CANCER MAY BE CURED. But if it is ignored, neglected at this time, as is so often, perhaps generally, the case; or if it is improperly treated, which is worse than no treatment at all, frequently such treatment really hastening the progress of the disease—in such circumstances cancer is SURE to progress, and soon become wholly incurable.

The practical conclusion is this: Any abrasion, sore or lump, however small, seemingly trivial and insignificant, that continues unhealed for a period, say, of **three to four weeks** without clearly understood cause, should be examined by a competent doctor, preferably by an experienced surgeon, and the best that is available. If he finds the condition cancerous, or even suspiciously cancerous, whatever treatment he advises should be submitted to AT ONCE; it should not be delayed a day longer than is absolutely necessary. Promptness here means SAFETY. Delay means DANGER.

The best treatment for cancer is usually a surgical operation. This is the unanimous opinion of all surgeons of much experience. When done early enough such operations are usually small matters, with no danger at all. Other

treatment, as x-ray, or radium, is sometimes preferable to operation. But that is a matter to be decided by the surgeon.

Warts, moles and other skin blemishes, particularly when they are on the face or scalp where they are irritated frequently by shaving, or by combing and brushing the hair or otherwise, quite often become cancerous; also, long-continued local irritation, especially of the lips, or tongue or other parts within the mouth, as by a decayed or broken and sharp-edged tooth, or even a pipe stem, may start a cancer, particularly in the aged; therefore all such sources of irritation should be removed, and as early as possible. Neglect to do this I have seen result in cancer that literally ate away large portions of the face, was most painful, and, of course, finally ended in death by slow torture. Yet in some, at least, of these cases all this might have been easily prevented.

The one thing most important to remember about cancer is that many cases may be prevented or cured when properly treated sufficiently EARLY.

VII.

WHAT TO DO TILL THE DOCTOR COMES (First Aid).

Lives have been lost that could have been saved by people who stood by awaiting the arrival of a doctor. The help needed was so simple that anybody could have rendered it. But nobody present knew what to do. Yet the knowledge necessary for such first aid is not large in amount or difficult to acquire. Everybody should be equipped with such knowledge, for any of us may at any time be confronted by such emergencies. Knowing what to do we may possibly save life, or at least help to lessen suffering and make more tolerable a distressing state of things. Moreover, we shall then avoid those glaring blunders, harmful, and sometimes fatal mistakes, from misguided efforts to render first aid. Our ample compensation shall be the comforting sense of having done the thing that needed doing.

Only the more common emergencies will be here considered, for these make up the vast majority of conditions needing first aid. This, together with some general instruction concerning emergencies, is sufficient to enable one to

do the needed thing in any emergency with which one is likely to be confronted.

When confronted with accidents in which a person has been severely injured, or in the presence of sudden and alarming sickness, many people become so much excited, agitated, perhaps alarmed, that they "lose their heads," more or less, when they are in no condition for rendering the help that is needed. In their efforts to help they may then even do that which is harmful. So first of all, we should learn how we may avoid becoming thus "rattled"; how we may keep a level head and do the proper thing with good judgment and a steady hand.

The first requisite for such cool judgment and efficiency in the presence of a calamity, is a clear idea of what should be done, and exactly how to do it. That will give a self-confidence that is otherwise impossible, and will go far in helping us to keep a level head and a steady hand. The instruction necessary for this I shall try to make clear as I discuss the details of first aid. Yet we may know clearly what to do and still blunder, unless we make the effort necessary for **self-control.** For a calamity is disturbing to the equanimity of all of us. A few people seem to have little or no ability for such self-control; some who seem even to pride them-

selves on having no "nerve" in the presence of emergencies. Such are powerless, or worse, in such circumstances, and the best and only service they can render is to keep out of the way of those who are more capable.

We "lose our head", become rattled, only when we are confronted with conditions that are **unfamiliar,** something that is unusual in our experience. The thing we have never done before we do without much confidence, hesitatingly, perhaps awkardly. On the other hand, in the presence of familiar every-day affairs, we are confident and keep a level head and do the proper thing readily, may be without a thought. Therefore, if we can make that which is unfamiliar somewhat familiar; if we can have some experience, practice, in that which is unusual, we shall be better prepared for meeting emergencies. Such actual practical experience is possible only to doctors, nurses and others whose work is with the sick and injured. Yet all of us may have a training that is similar, that shall give us a reasonable degree of self-confidence and enable us to do the needed thing when confronted with emergencies. Such training consists of first learning clearly and definitely what should be done in such circumstances, which may be accomplished by reading and re-

flection, then making practical application of this knowledge by treating **imaginary** cases, repeating this again and again, thereby fixing firmly and clearly in the mind the facts that must be remembered and the exact manner of their practical application.

This method is more practicable and successful than might at first be supposed, as has been proved many times. A personal experience of my own may be worth relating. During my medical-student days I learned of a certain kind of emergency case that any doctor in general practice may at any time be called upon to treat, in which the patient may bleed to death within a minute or two if the doctor does not know exactly and clearly what to do, just how it should be done, then does it promptly, properly and successfully. There must not be any hesitation, or wavering uncertainty. In a word, the doctor must know exactly what to do, how it should be done, and then do it quickly, with a clear head and sure hand, else his patient will surely and quickly die. All this made a profound and lasting impression upon me, and during the first years of my practice as a young and inexperienced doctor it "got on my nerves"; thoughts of it haunted me much of the time; I dreamed of it of nights; I dreaded the coming

of my first case of this kind. Which made me review again and again my knowledge of the subject, and to treat many, many cases in my **imagination,** going over every detail carefully and exactly. When at last I was confronted with the rather formidable responsibility of treating a case of this kind for the first time, I was rather surprised, and greatly gratified, when I did the right thing as confidently, promptly, properly, skillfully and **successfully** as though I had done it many times before, as I had,—**in my mind.**

In striking contrast with this experience was that of a neighboring doctor, who having his first case of this kind, "lost his head" completely, confessing to me that he became so frightened, confused, "rattled", that he did practically nothing at all that was helpful, while his patient bled to death, much as she should have if no doctor had been present. When I asked him if he had given such cases much study and thought previously, he confessed that he had not; that really he knew scarcely more of the subject than its name! To him the problem was practically wholly new and unfamiliar. No wonder that he made the tragic failure he did! The wide difference in results between his case and mine was because I had become familiar with

such cases, and he had not. Such familiarity with the unusual may be acquired by anyone by the self-training I have indicated.

Read carefully and attentively, then re-read, again and again, the following concerning the few emergencies most commonly met with. Then do in **imagination** the things I shall advise, and do it **repeatedly,** until all becomes familiar, is "at your finger's ends." The result will be self-confidence, founded on real ability, that shall be well worth any time and effort it may cost.

Hemorrhage (Bleeding).

Scarcely anything is more alarming and disconcerting than to see a wound that is bleeding profusely. We feel instinctively that there is imminent danger, as there really may be, for life may be very quickly lost from profuse hemorrhage. Then if ever we should know clearly what to do, and exactly how to do it. Yet the treatment that is necessary is usually very simple and may be easily and successfully done by anybody. The bleeding comes, of course, from blood vessels that have been cut or otherwise divided, which then simply **leak.** To stop the leak the quickest, simplest, easiest and usually the best way, is to make **pressure,**

directly in the wound, or immediately around it, which closes the leak as long as the pressure is maintained, just as a leaking garden hose would be stopped by simply stepping on the leaking place. Such pressure is made preferably with surgeon's gauze, folded into a firm compress, such as is contained in emergency packages, grasped with the fingers and pressed **into the wound** where the blood is flowing, the pressure sufficient to stop the flow of blood, and so maintained until the arrival of a doctor. If the pressure must be long maintained this may be done by relays, one person relieving another as his hand becomes tired. Surgeon's gauze may not always be at hand, of course, in which case any clean cloth, as a clean handkerchief, will answer the purpose, folded into a firm pad, and used the same as the gauze. If nothing of the kind is available, then make the pressure with the bare fingers, or whole hand if the wound be large, first washing the hand, if possible, but in the absence of conveniences for this, the unwashed hand should be used if much blood is being lost, taking the chance of possible infection of the wound thereby, this being warranted by the urgency of the case.

Pressure made thus directly in and around

the wound, is usually preferable to pressure applied to the artery supplying the wounded part, as is so commonly advised. To apply pressure to an artery properly, involves more knowledge of anatomy than most people possess. Such pressure is usually applied with a tourniquet, or something similar, which in the hands of an inexperienced—and probably an excited—person, may easily be applied so tightly as to do serious harm, more particularly if such pressure must be long maintained. So the use of a tourniquet should usually be left for the doctor to attend to. Yet if the bleeding can not be stopped by local pressure, then a bandage or other strong ligature around the limb should be applied above the wound, that is, between the wound and the heart, and twisted tightly enough to stop the flow of blood, but no more than that, and left thus until the arrival of a doctor. However, this will rarely be necessary if local pressure is applied properly.

All bleeding wounds do not need such first aid, but only such as bleed **profusely,** particularly when the blood flows in intermittent spurts, which means that such blood is coming from a wounded artery, where it is under strong pressure that makes it flow rapidly, therefore more dangerously. Simple oozing of blood

from a small wound, or even one of considerable size, if of short duration, may need no other first aid treatment than the protection of a clean bandage or compress.

Liniments, lotions, salves, ointments, etc., are wholly unnecessary in first aid; they may even do harm. Keeping wounds **clean**, free from possible contamination, is, next to stopping dangerous bleeding, the most important thing to do. Therefore everything that is not absolutely necessary should be kept away from a wound.

Broken Bones; Dislocated Joints.

All that is usually necessary in first aid care for broken bones or dislocated joints, is to place the injured limb in the position that is least uncomfortable, and keep it there, immovable if possible, by means of cushions, pillows, folded blankets, etc. If the injured person must be moved a broken bone should be straightened sufficiently to apply something in the way of a splint, that will help in preventing movement of the broken and jagged ends of the bone, as such movement is painful, and may also do serious harm. Such temporary splints may be of board, lath, pasteboard, etc., anything rigid and of sufficient length to reach well above and be-

low the seat of fracture. In the absence of anything better for the purpose, a walking stick, a folded umbrella, a straight stiff stick of almost any kind will answer the purpose. Whatever is used should be applied to the injured, but straightened limb, parallel to the broken bone, and kept firmly in place by means of bandages or other strips of cloth, handkerchiefs, straps—whatever may be available that will answer the purpose—bound around the limb and its supporting splint.

No attempt should be made to replace a dislocated joint; that may safely await the arrival of a doctor, whose knowledge and skill is necessary for such treatment.

If there is uncertainty as to whether a bone is broken, or a joint is dislocated, this should be left for the doctor to decide, meantime keeping the injured part in the position that is found to be least uncomfortable.

Infected Wounds; How to Prevent.

Wounds that become infected always heal slowly. Some kinds of infection cause blood poisoning, always a serious affair, with much and usually prolonged, suffering, and not infrequently death. Therefore the prevention of infection is a matter of much importance.

Wounds are often infected by what is done as first aid before the arrival of a doctor. In such efforts nothing should touch the wound that is not absolutely necessary, as almost everything not specially protected or prepared may carry infective material that may be dangerous. Wounds that are to receive the attention of a doctor should be simply covered with surgeon's gauze or other clean cloth, after stopping hemorrhage if that be necessary. If the wound is soiled with grime, or grease, as in machinery accidents, do not attempt more cleaning than can be done by simply pouring clean water into and around the wound, leaving any further cleaning that may be necessary for the doctor to do.

Slight wounds, that hardly need the services of a doctor, nevertheless should be given attention that shall prevent infection. The simple treatment that is necessary may be done by anybody. Do not attempt to do too much, bearing in mind that simple **cleanliness** is of first importance. Scratches and other slight injuries of the skin, that bleed little or not at all, often are given no attention whatever; yet such slight wounds may become infected with what becomes very dangerous blood poisoning. In fact, such trifling injuries, especially on the hands, seem

especially apt to be followed by blood poisoning. Therefore such slight wounds should **always** have proper care, and at once. I have seen cases of the worst kind of blood poisoning, some of them ending in death, that doubtless could have been prevented had there been applied at once to the slight wound a few drops of tincture of iodine. The very few things necessary for such treatment should be at hand in every household, shop, office—wherever people are employed who may meet with such slight accidents. All that is needed is, say, a four-ounce bottle of peroxide, a one-ounce bottle of tincture of iodine, a small collapsable tube of flexible collodion, "new skin," and a small package of surgeon's gauze. First clean the site of the wound with clean water, small pieces of the gauze being used as a sponge, followed by a few drops of peroxide applied directly in the wound, the froth from which should be gently wiped away after a moment. Then apply to the wound and the skin immediately around it, tincture of iodine, full strength if the wound be very small, if larger, diluted with water to half or quarter strength. When the wound and surrounding skin have become dry, apply the collodion, if the wound is small, and thoroughly clean; if larger, or if there should be any doubt

of its thorough cleanliness, as would be the case in lacerated wounds, or wounds much soiled with machine grease or other grime, a simple dressing of a few layers of gauze, kept in place with a bandage, would be the proper thing.

Infection's opportunity for doing harm is usually only while the wound is "fresh," that is, during the first few hours, for the self-defensive forces of the body are quickly mobilized and then usually resist successfully the invasion of infective enemies. Therefore, after the first dressing of small wounds they usually need no further treatment than simple measures for keeping them clean and protected from ordinary injury. Nature will then do the healing without further aid. The use of arnica, witch-hazel, salves, ointments, etc., is wholly unnecessary, and may in some cases be positively harmful. Any further treatment that may be necessary for small wounds should be attended to by a doctor.

Burns.

The pain from burns being very intense, the relief of pain is a very important part of their first-aid treatment. Fortunately, the best remedy for such pain is also the best remedy otherwise for burns. This remedy is **soda,** simple

baking soda, saleratus, obtainable in any kitchen. This should be dusted freely on the burned surface, which should then be covered lightly with gauze or other clean cloth, made wet with a strong solution of the soda in cool water, and kept saturated and cool by frequent renewal, or by constantly dripping the solution on the dressing. The almost instant relief of suffering from this simple treatment is very gratifying and striking, more particularly in the less serious burns that are not deep. In such this treatment, continued until pain does not return on removal of the dressing, may be all the treatment needed. If blisters follow, the fluid in them should be let out by making a small puncture at their base, the pelicle of thin skin being left otherwise intact, and in place, this being the best possible protection for the denuded and sensitive surface beneath. A light bandage for further protection should be applied. If a "raw" surface follows slight burns for which a doctor is not called, a suitable treatment is white vaseline, spread rather thickly on gauze or other clean, soft cloth, applied to the sore and kept in place with a bandage.

Deep burns, and those of considerable area, should have treatment that only doctors can give, following the emergency treatment I have

described. Extensive burns are always serious affairs, and usually need treatment requiring much knowledge, experience and skill.

When a person's clothing is a-fire, especially if from explosion of gasoline or oil, the unfortunate victim usually becomes panic-stricken and runs distractedly, which fans the fire to greater intensity. To stop this running, and extinguish the fire is, of course, the first necessity. This may be best done with a blanket, shawl, overcoat, a rug—anything, but preferably woolen material, that burns less readily than cotton or linen, with which the frantic runner is caught and restrained by wrapping him snugly, which at the same time extinguishes the fire. Burned clothing should be removed gently as possible after which the soda dressing should be applied pending the arrival of the doctor.

Choking.

To see a person while eating suddenly choke, from a morsel of food that has gone the wrong way, or has been too large to swallow and has stuck in the throat, threatening suffocation, may be very alarming, and possibly exceedingly dangerous, by preventing air from going into the lungs. This accident occurs oftenest in young children; their frantic gasping for breath,

the staring, bulging eyes, suffused face that quickly becomes livid—death seems to be impending, as it really may be if there is not relief **immediately.** There is no time for calling a doctor. Somebody right at hand must do the needed thing. And one must know exactly what to do and how to do it, with a clear mind and a sure hand.

This accident usually causes a spasm of coughing, which may dislodge the obstruction, bringing immediate relief. But if this does not quickly occur the child should be firmly grasped to restrain its struggling, while one's finger is put into the throat, its tip hooked around the offending substance, if within reach, as it often is, and brought forward, which brings immediate relief. Of course one should be careful not to push the substance still further into the throat, which may be avoided by taking pains to keep the finger tip **to one side** of the mouth and throat.

Some precaution is advisable for avoiding being bitten by the struggling child, who in its excitement may unintentionally inflict painful injury on the finger of him who would relieve it. A simple and effective way to avoid this is to press with a thumb or finger the child's cheek between its opened jaws, which will restrain it

from biting one's finger by causing it to bite its own cheek when its jaws attempt to close.

Another method for the relief of choking, is to grasp the child by its ankles, and turning him "upend down", "jounce" him up and down, which may dislodge the offending substance. This method is most effective in cases of strangling rather than choking, when fluid or soft food has "gone the wrong way." It should be tried also when it is found that the obstruction is beyond the reach of the fingertip. It is most applicable, of course, to small children.

Drowning.

Getting the water out of the lungs and air into them is, of course, the most urgent thing to be done in case of drowning. As water runs down hill when given a chance, obviously the thing to do is to get the drowned person in a position favoring this, that is his head lower than his lungs, which is the reason for the rather common advice to "lay the body across a barrel;" good advice if a barrel is at hand or quickly available, which may not often be the case. Something else that is right at hand may answer the purpose equally well, as a blanket, overcoat or other clothing made into a firm roll, automobile cushions, a camp-stool, a log, a box

—anything that shall hold the body up while the head hangs down, face downward, so that the water may flow out of the lungs. As soon as the body is in this position, artificial respiration should be commenced, which will help still further in getting the water out and air into the lungs. Artificial respiration may be done by standing, or kneeling, astride the body, lying face downward, yourself facing the head, placing your hands, flat, one on each side of the spine, over the lower ribs, on which should be made intermittent pressure, fifteen to twenty times per minute, by leaning your body forward, thus pressing on the ribs and lungs, which forces air and water out, then releasing the pressure by leaning your body backward, the resiliency of the ribs causing the lungs to expand and fill with air. This should be continued for an hour or longer, if signs of returning life, as gasping, returning normal color of the face, etc., do not sooner appear. Meantime the body should be wrapped in warm blankets as soon as possible, without removing clothing if dressed, until normal breathing has returned. The extremities should be made warm, if possible, by wrapping hands and arms, feet and legs in warm blankets. Restoration and maintenance of body warmth is very helpful. To this end hot drink

should be administered as soon as the patient can swallow; simple hot water will answer the purpose, but strong black coffee, or tea, is better, being mild and harmless stimulants. Do not give alcoholic drinks, which are worse than useless.

Such efforts, particularly artificial respiration, should be continued until the arrival of a doctor, even though the time may be long and the case seem hopeless, for life has sometimes been saved only after hours of persistent effort.

Electrical Shock.

In accidents from high voltage electrical currents, breathing may be suspended, much the same as in drowning, but with the difference that there is no water in the lungs. Artificial respiration is therefore often the most important and urgent thing to do in first aid for such accidents. And it is even more important than in drowning that artificial respiration should be kept up a long time, for hours if necessary, in these cases, for very surprising recoveries have rewarded such persistent effort. Further first aid in these cases should be much the same as for drowning, that is, efforts for the restoration and maintenance of body heat.

Fainting.

Fainting is more alarming than dangerous, usually. In fact, there is seldom, if ever, any danger at all when the simple and effective help is given that anybody can render.

True fainting is caused by sudden and temporary diminution of blood in the brain; therefore all that is usually needed is to **get more blood into the brain.** This may be done easily and quickly by simply having the fainting person lie down with his head **low,** the feet higher than the head. Gravity will do the rest, as blood runs down hill, of course, same as any other fluid. Recovery may be hastened by raising the limbs, both arms and legs, to the perpendicular position, while the patient remains lying on his back with head still low, which causes more blood to flow into the brain. At the same time he should have abundance of freely circulating **air,** for breathing is very shallow, almost suspended, therefore the little air he gets should be of best quality. If indoors, open wide doors and windows; place the patient in a draft of air, or fan him vigorously. People should not gather around a fainting person, as that may interfere with free circulation of air. Dashing cold water on the face may be somewhat

helpful, by causing the patient to **gasp,** which means a deeper breath; but to drench him with water, which is so often done by over-excited attendants, is wholly unnecessary, unpleasant and messy. Medicines are quite unnecessary, although "smelling salts," if at hand, may be somewhat helpful. Medicines by the mouth, or even hypodermically, are too slow in their action; fainting is usually such a brief affair that the patient recovers long before medicine given by the mouth can act. As soon as the patient can swallow, a little water to drink may refresh him; still better would be hot black coffee, or tea, if at hand.

There is a kind of fainting that is spurious; really it is not fainting at all, although it may sometimes be a very good imitation of the real thing. This is the sudden, **apparent,** but really **feigned,** unconsciousness of hysteria, occurring oftenest in emotional, "high-strung" young women, although older women, and some men, may become hysterical under unusual stress. Such "attacks" are usually brought on by grief, anger, jealousy, or other emotional excitement. These circumstances help us in recognizing this variety of "fainting," as will also the fact that in this there is never the extreme **paleness** that is always present in true fainting. Another

distinguishing symptom of hysteric fainting is **quivering of the eyelids,** which never occurs in true fainting. Hysteric fainting has an air of **shamming** to the discerning on-looker; the unconsciousness is not real, but "put on," more or less; it also **lasts too long,** true fainting being very brief, a very few minutes, at most, while an hysteric "fit" may continue for hours, even days, the length of time depending largely upon the amount of alarm and ill-advised sympathy it may elicit from relatives, friends, or other attendants. This gives a valuable hint as to the treatment needed by this kind of fainting—treatment in which everybody present may lend a hand by simply restraining any expressions of sympathy, alarm or solicitude (there is no danger at all in an hysteric fit). Don't get excited; that would only make matters worse. On the other hand, an air of composure, or indifference, on the part of everybody present, will usually help amazingly in shortening the duration of the fit. It may be prolonged indefinitely by undue solicitude and fussiness. In a word, the less done for an hysteric fit the sooner it will pass, usually. However, if such occurrence recur again and again a doctor should be consulted, for there is always something wrong,

physically or mentally, with such people that should be corrected.

There is still another variety of fainting, and this a very serious matter as it is caused by various grave conditions of the heart. In this the patient does not usually become wholly unconscious, although he may when death is impending; but he becomes very weak, and pale, perhaps unable to stand or even sit; gasps for air and may be much relieved by fanning, or by being in a draft. He should lie down, as that at once lessens the work of the weak heart, which is the most urgent need, and should remain lying until the arrival of a doctor. If he can swallow, a cup of coffee, strong, black, and hot as can be taken readily, is an excellent, and harmless, stimulant, and if available should be administered pending the arrival of the doctor. The first aid here needed is practically the same, it should be observed, as in simple fainting, therefore attempting fine distinctions as to the kind of fainting is unnecessary. That should be left for the doctor to ascertain.

Unconsciousness.

A person may become unconscious from many and widely different causes, as injuries of the brain, apoplexy, narcotic drugs, drunkenness,

etc. The treatment necessary will depend upon the cause, of course, and this can be determined usually only by a doctor. Therefore all that others should attempt to do as first aid in cases of unconsciousness will be only whatever common sense may suggest that should render the patient least uncomfortable. If it is known positively that the stupor or unconsciousness is from opium, morphine or laudanum, efforts should be made to keep him awake, at least to lessen somewhat the deep stupor, by compelling him to walk, if possible, supported between two attendants. In the unconsciousness from apoplexy or other brain injuries, trying to arouse or waken the patient would do no good and might do serious harm; such should be kept as quiet as possible. Following the slight concussion of the brain resulting from the falls and bumps of young children, they usually become drowsy and inclined to sleep as soon as the first pain from the accident has somewhat subsided. Quite commonly efforts are made to keep them awake, from the mistaken belief that sleep is then injurious in some way. The child should be permitted to sleep, and as long as it will, for sleep is then the one thing it needs most, and usually is all that it needs.

Poisoning.

Whatever poison has been swallowed, the first and most important thing to do is to get it out of the stomach, and quickly, if possible. To await the arrival of the doctor before doing anything might be a fatal mistake. Prompt action is here exceedingly important. Fortunately, almost anybody may do what is necessary, and the things needed are usually at hand.

If vomiting can be induced the stomach may thereby empty itself; therefore vomiting is the important thing. Now vomiting may be induced easiest, and is most effective, when the stomach is **full,** that is, somewhat distended; so first fill the stomach by giving drink, milk if at hand, otherwise water—warm water if possible. As soon as the stomach is full, or the patient can not be induced to drink any more, vomiting may be induced by putting a finger down the throat and moving its tip about over the root of the tongue and sides of the throat, persisting in this until vomiting commences, and renewing it if necessary until the stomach has emptied itself. This rather unpleasant but effective method for causing vomiting is quicker in acting and is preferable otherwise to emetic medicines, and has no objectionable after effects, as has say, mustard, which often is advised as an emetic. Mus-

tard is itself a powerful irritant, as shown by its effects on the skin when it is used as a "mustard plaster." When it is given as an emetic it may irritate the stomach seriously, if vomiting is much delayed; and as many poisons are harmful because they irritate the stomach the irritation from the mustard would be added to that from the poison. If mustard is used as an emetic it should be under the supervision of a doctor.

The giving of antidotes for poisoning should usually be left for the doctor, as the successful use of antidotes depends upon a knowledge of chemistry and physiology that people generally do not possess. However, the following may be easily learned and remembered, and the knowledge used practically by almost anybody: **Acid** poisons are neutralized, that is are rendered harmless, by **alkalies;** and conversely, of course, alkali poisons are neutralized by acids. A practical example is **lye,** a poisonous alkali that is sometimes drunk, especially by young children, by mistake for something else. Here the giving of **vinegar,** an acid, is a proper antidote. Of course the vinegar should be diluted with water sufficiently to make it drinkable. In poisoning from acids, a rare occurrence, comparatively, give baking soda, "saleratus," bicar-

bonate of soda—three names for the same thing—obtainable in any kitchen. The danger from both alkaline and acid poisons is mostly local, that is they "burn" the mouth, throat and stomach, and very quickly, therefore the antidote should be given as soon as possible, long before a doctor could arrive, usually.

In poisoning from narcotics—opium, laudanum, morphine, etc.—the danger is largely from **sleep,** or **coma** really, from which the victim may be aroused with difficulty, if at all. Here the most important thing to do as first aid is to keep him from sinking into such profound coma that he can not be aroused, which may usually be done by shaking him frequently, or if possible by keeping him walking, supported between two attendants, until the arrival of the doctor.

In every case of poisoning a doctor should be called, and at the earliest possible moment. He should be told when summoned what poison has been taken, if this is known, so that he may bring the proper antidote and other equipment necessary for using immediately, as prompt action is exceedingly important, of course, in every case of poisoning.

The emergencies I have here discussed are the ones most often met with, and in which any-

body may render first aid that may save life. Many other, but less common, emergencies may be met with, of course, but a detailed discussion of such is beyond the scope of this book, and besides is hardly necessary, or desirable. However, the following may be added in a general way, being applicable to all emergencies:

A common mistake is to attempt to do **too much**; ill-advised efforts that may do more harm than good. In their excitement and desire to be helpful, from an impulse to "do something," some people act without due consideration, when they do harm although they wish to be helpful, of course. A good rule here is to do only what you **know** will be helpful; "be sure you're right, then go ahead." If you do not know **exactly** what will be helpful it would be safer, usually, to do nothing at all, beyond making the sufferer as comfortable as circumstances will permit, by whatever means commonsense may suggest. To give this medicine or that with no clear reason for so doing; to apply liniments, lotions, ointments or messy poultices thereby possibly infecting a wound, when wound infection may do serious harm—all this would be unwise, to say the least. All medication should be left for the doctor to attend to, for rarely is there urgent need for medicines in

emergencies; other things, that anybody may do, are usually far more urgent.

In pre-prohibition times it was a common custom in the first aid treatment of emergencies to give whiskey, brandy, wines or other alcoholic stimulants. Yet rarely, if ever, did they do any good, and in some cases they did serious harm. Sometimes the doctor would find his patient literally **drunk** from such unwise use of stimulants. To be made drunk in addition to the other misfortunes of the sufferer could not possibly be helpful, to put it mildly. In this connection it should be said for those who object to prohibition because of the difficulty it makes in getting alcoholic stimulants for medicinal purposes, that this is a far less serious matter than they may suppose; that on the whole this may be a really fortunate state of things, for when alcoholics could be obtained easily their indiscriminate, and often reckless, use probably did more harm than good, in the aggregate. That this is the opinion of most medical men of the present time is, I believe, a safe assertion. In support of this I will add that I have heard the statement made in a large convention of railway surgeons, that the only place where the use of alcoholics is warranted in modern surgery, is **externally!** And this as-

sertion was endorsed all but unanimously by those present. I may also add that many physicians with large practice have told me that for years they have not prescribed alcoholic beverages, yet their practice has been as successful, at least, as it had been formerly when they had been prescribed. This has been my personal experience.

When a stimulant is really needed in accidents or sudden sickness, **coffee** will usually answer the purpose far better than any alcoholic, without any danger, or objectionable after-effects. Coffee should be given black, hot, and strong, for such purpose. It is specially helpful when the injured or sick person feels cold, has a chill, is pale and weak, as is so often the case in such circumstances.

In first aid there is usually no one thing that will do more good than simply putting to bed the injured or sick person, as soon as possible. The rest, warmth and quiet of a bed is valuable and comforting help in such circumstances. Nothing else can take its place. If the patient is cold, or has a chill, make him warm, with blankets, hot-water bottles, hot drinks, best of which is coffee. On the other hand, if he is too warm, as in sun-stroke, or simple over-heating, endeavor to make him cool, by means of

little or no covering, cold drink, cold, wet cloths or ice, applied to the face and head, cool sponging, etc., meantime placing him in a draught of air.

Usually food should not be given in first aid. To urge an injured person, or one attacked with sudden sickness, to "eat something and you'll feel better," as is done so often, is a mistake, as food would not then be digested properly, if at all; undigested food in the stomach does harm rather than good. By simply waiting until the patient becomes hungry, when his digestive organs shall be competent for their work, will obviate harm from this source.

See to it that the patient has good fresh air to breathe; we need such air in any circumstances, but especially in the stress of an injury or of sudden and serious sickness.

Sleep is often a valuable aid, so if the patient is inclined to sleep make conditions as favorable as possible for that. **Coma,** from injury of the brain, resembles sleep yet is very different, may seem to be harmful, as it may end in death; but it is not the coma but the brain injury that kills. Therefore efforts to waken a person who is comatose from brain injury can not do any good, and may do harm.

The various "home remedies" that are so of-

ten given as first aid, rarely if ever do any good. All medication should be left for the doctor to attend to.

If you are uncertain about what you should do in any emergency, you should not attempt anything further than to get the patient to bed, if that be possible, making him as comfortable as you can, then await the arrival of the doctor with whatever composure you may be able to command. Sometimes we can not do anything that is better than simple waiting.

VIII.

SEX—AND COMMON SENSE.

In a book of this kind it seems fitting that something should be said concerning the important but generally shunned subject of sex. The subject is so exceedingly important, and so large, however, that I shall attempt no more than to call attention to the need for right understanding of it, and how such understanding may be acquired.

Sex, and the desire to use the sex function, constitutes a powerful impelling force in every living thing. In all animal life, including mankind, it is second in intensity only to the desire and impulse for self-preservation. First of all the individual must protect his own life, and his desire to live prompts him to do whatever is necessary to that end. Next to this, and no less important, he must **transmit** life to his offspring, for which he is equipped with a desire and impulse hardly less impelling than his desire to live. In a word, the chief elemental concern and business of all living things is the preservation and the transmission of **life.**

The preservation and the transmission of life being thus so exceedingly important, a method that is sure-acting for their accomplishment is

very necessary. Reason, judgment and memory are not alone sufficiently trustworthy here. Reason might err, judgment fail, in telling us what to eat, for example, or memory forget to tell us when we should eat, to properly maintain life; or reason, judgment and memory could not act quickly enough to protect life when life is suddenly and imminently endangered. Likewise mentality alone could not be safely trusted to insure perpetuation of the race; here again reason and judgment might err, or memory forget, at the risk of extinction of the race.

Therefore the preservation of individual life, and the perpetuation of the life of the race, are both controlled largely by **instinct,** desire, passion, that is more impelling and dependable than is mentality alone, and insures the preservation of individual life, and the perpetuation of the life of the race.

Passion for the transmission of life being powerful and dominating as it thus must be. it is powerful for both good and evil. When it is rightly directed and controlled its direct results are love, marriage, children and a home, with all the beneficent results coming therefrom; while its indirect results affect almost every worthy human activity. In a word, love, marriage, children and home is basic in civili-

zation. On the other hand, when the passion for the transmission of life is misdirected, uncontrolled or perveted its direct results are sensualism, polygamy, concubinage, adultery, prostitution and venerial disease; while its indirect results include almost every other misdemeanor and crime, all of which is the very antithesis of civilization. The one is a powerful help to much that is right and desirable, the other an even more powerful hindrance.

The need for right direction and control of sex passion and function is therefore clearly apparent. The first requisite for this is a right understanding of the subject. We must first know the facts in order to have an intelligent understanding of what we should do and how it may be done. Yet there is hardly any other important subject about which most people know so very little. It has been well said that "people know very little about sex, and what little they know is **wrong.**" And such knewledge is not only wrong but is also mostly unclean and corrupting, therefore is worse than no knowledge at all.

This widespread ignorance of sex is a natural and inevitable result of the conditions associated with this subject. Modesty and reticence—natural and right attributes of clean-minded

people—restrains and largely forbids free and open discussion of this subject as other subjects are discussed; sex is barred, mostly, from pulpit, rostrum and public print. False modesty restricts still further such discussion as is permissible. Therefore discussion heretofore has been limited, and largely by people who were not well fitted for it, sentimentality taking the place of sense in some of them, others lacking in a right sense of modesty, still others with salacious minds, and a few with minds that were perverted.

But fortunately a better state of things in this matter has come in recent years that has already brought much improvement and promises much more. A more tolerant attitude has largely taken the place of false modesty; people are coming to see that they should know more than they do about these matters; teachers are learning how to impart such knowledge without doing violence to true modesty. For this better spirit we are indebted to a few educators and physicians who, seeing the great need for enlightenment, have given much effort and time to this subject. So there may now be obtained from various sources not only all necessary information of this kind, and of a wholly trustworthy character, but also in-

struction in the perplexing question as to how best to impart such knowledge.

Much of this education, in fact most of it for adults, may now be obtained by reading. In fact, this is the preferable way for acquiring most information of this kind, for we can **read** about some aspects of this subject concerning which we would be reluctant to listen. Such reading matter, of highest quality, is available from several trustworthy sources. One of these is the United States Public Health Service, Washington, D. C., who will send on request lists of their publications of this kind, which may be obtained without cost. One of their more recent pamphlets, "Sex Education in the Home," is well worth reading—and study—by every thoughtful person, parents especially. In this pamphlet, discussing the importance of and need for such education, the writer says: "Formerly the subject of sex was associated with secret and vicious practices; to discuss it was indecent. Now, men and women are coming to understand that the sex function is intimately connected with the physical, mental and moral development of the individual and with the welfare of the entire race. People are learning that its right use is the surest basis of health, happiness and usefulness, and that it is

a subject full of nobleness, purity and health. * * It has been discovered moreover that many of the disasters mentioned are due to false ideas acquired in childhood. When a mother evades the questions of her child regarding the facts of birth, or answers them untruthfully, its questions thereafter are generally directed toward other sources of information. The results are often most unfortunate. Sex education, therefore, should begin in the home not later than the time when the child asks its first questions about the origin of life. It should proceed in easy, progressive stages, a little here and a little there, on through the years until the child has become an adult."

Other sources of reading matter for sex education may be obtained, gratis, from State Boards of Health, most, if not all, of the states maintaining such boards, who will send lists of their publications on request. A wider range of reading matter of this kind, especially for more advanced readers, may be obtained from The American Social Hygiene Association, New York, 105 West Fortieth Street. All of the publications obtainable from this Association are of highest character and wholly trustworthy. Unfortunately this can not be said of much that has been published on the subject of

sex, not a little of which has been done by people who were incompetent, untrustworthy, and in some cases even worse, being a product of poorly balanced or morbid minds, the subject of sex having strange fascination for some minds of this character, that leads them to pose as teachers, but whose teaching is much like the blind leading the blind.

Not much reading is necessary for right sex education. In fact one may easily read too much in this line, for the subject leads to morbid curiosity in many people, the gratification of which may be decidedly harmful. So after having acquired the comparatively little information that one really needs concerning sex, one should stop reading about it, even thinking about it, as the sex functions are least troublesome and are nearest normal only when they are kept pretty much out of mind.

No book or other printed matter can answer every question one may need to ask. Legitimate personal questions concerning sexual matters particularly require personal answers. Such information may be obtained usually from the family physician, or from reputable sex specialists, or others who have devoted thereto special attention and study. Such inquiries may be made and the answers given by means of

letter correspondence. This has been proved to be both practicable and satisfactory, in some cases even more satisfactory than verbal counsel and advice, as one may be less reluctant to write than to speak of personal questions concerning sex.

End.

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